FIG. 1 (PRIOR ART)

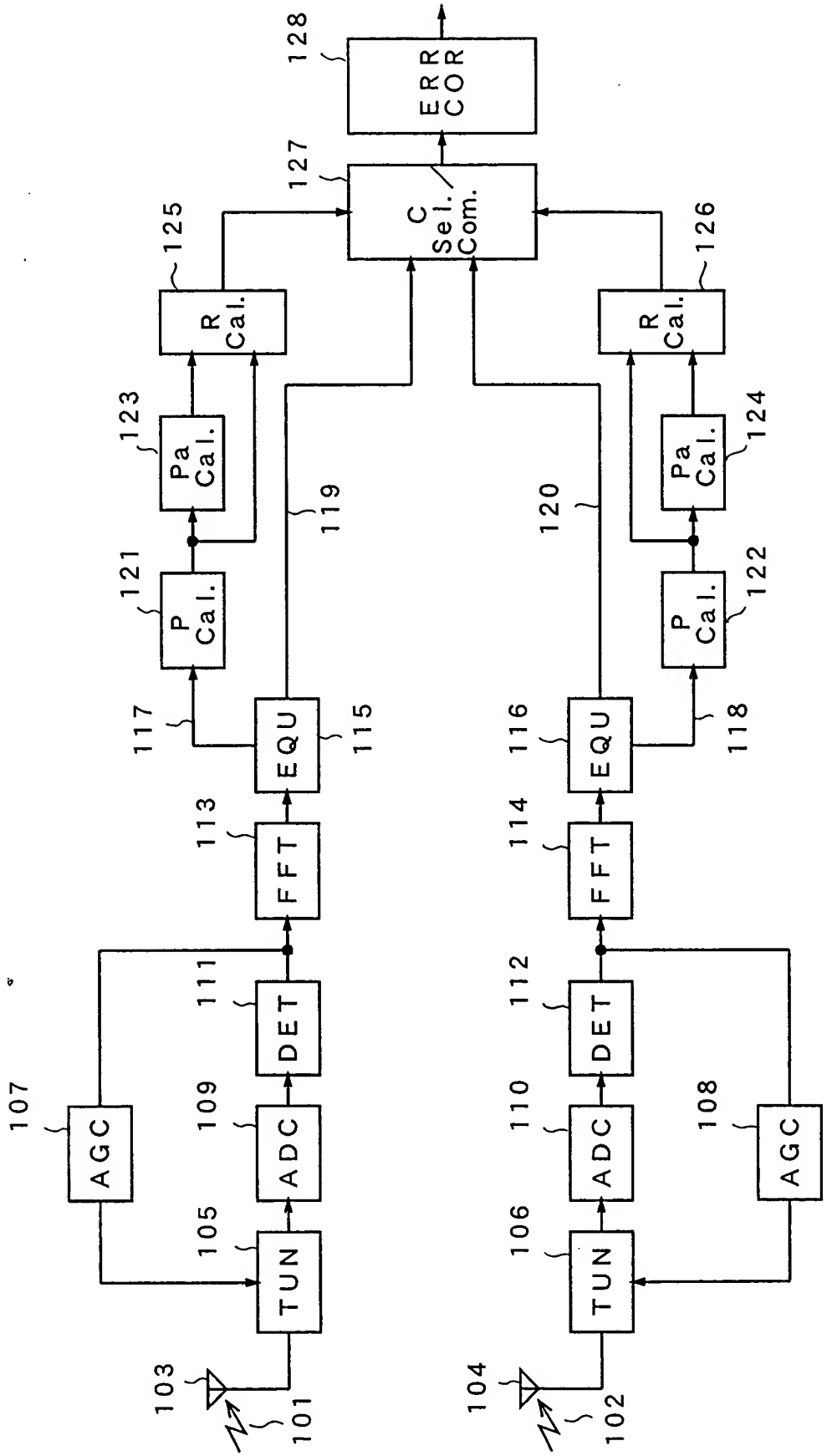


FIG. 2A (PRIOR ART)

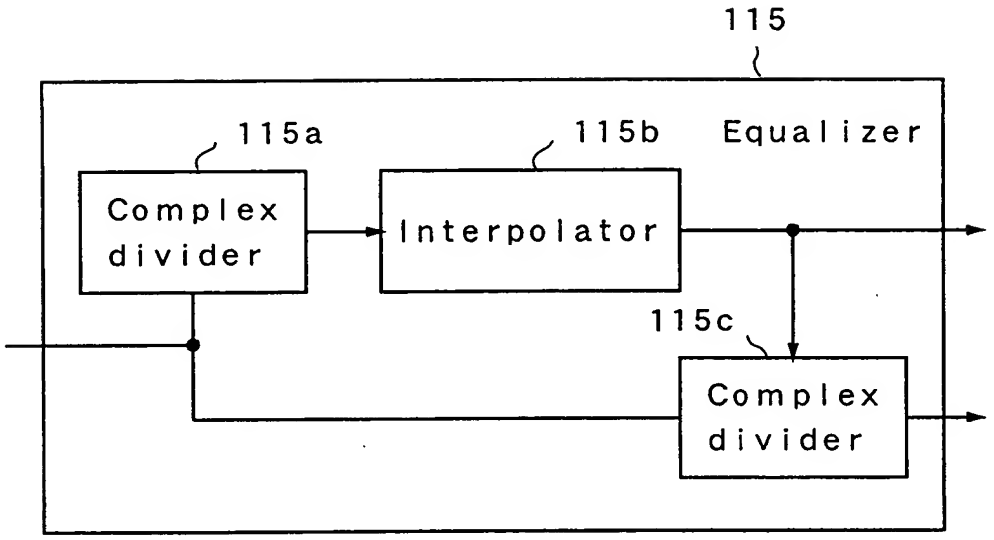


FIG. 2B (PRIOR ART)

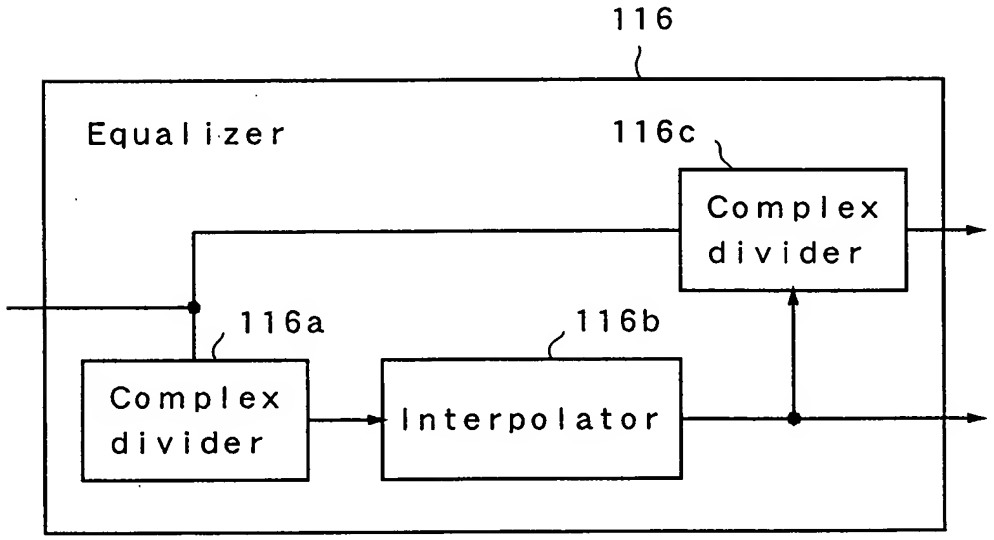


FIG. 3 (PRIOR ART)

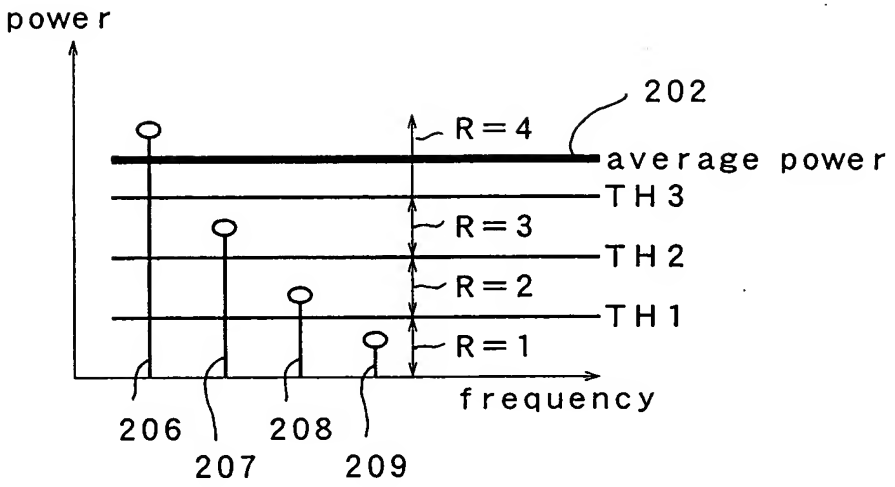


FIG. 4 (PRIOR ART)

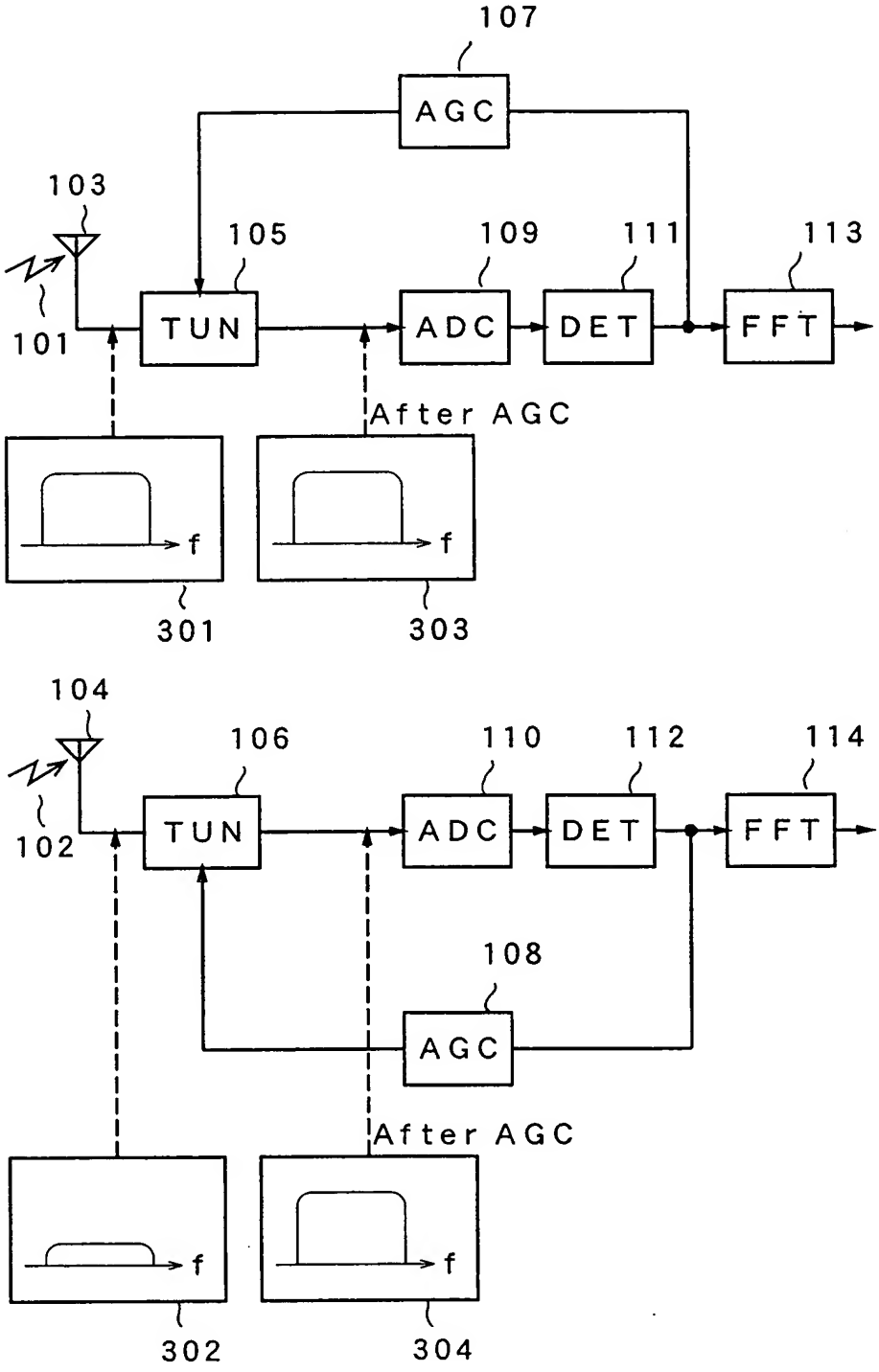


FIG. 5 (PRIOR ART)

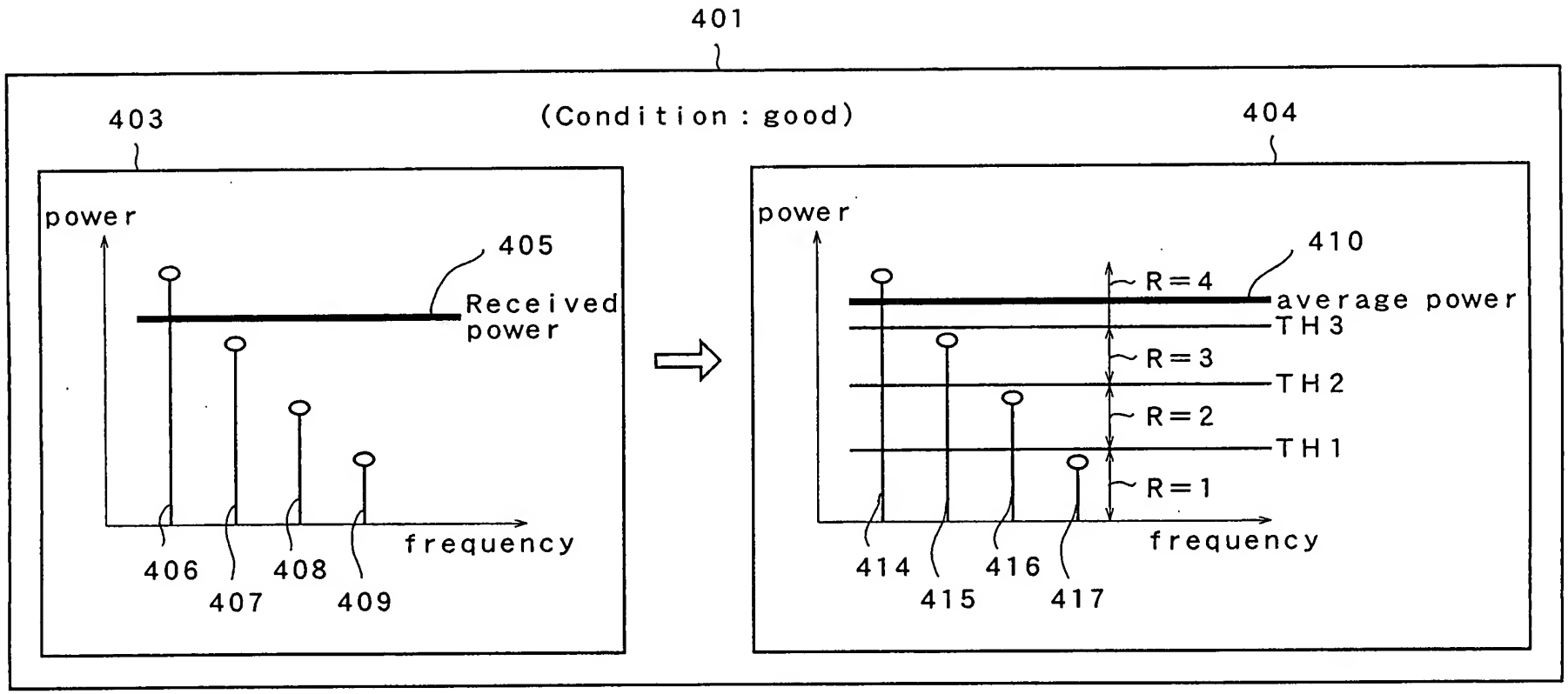


FIG. 6 (PRIOR ART)

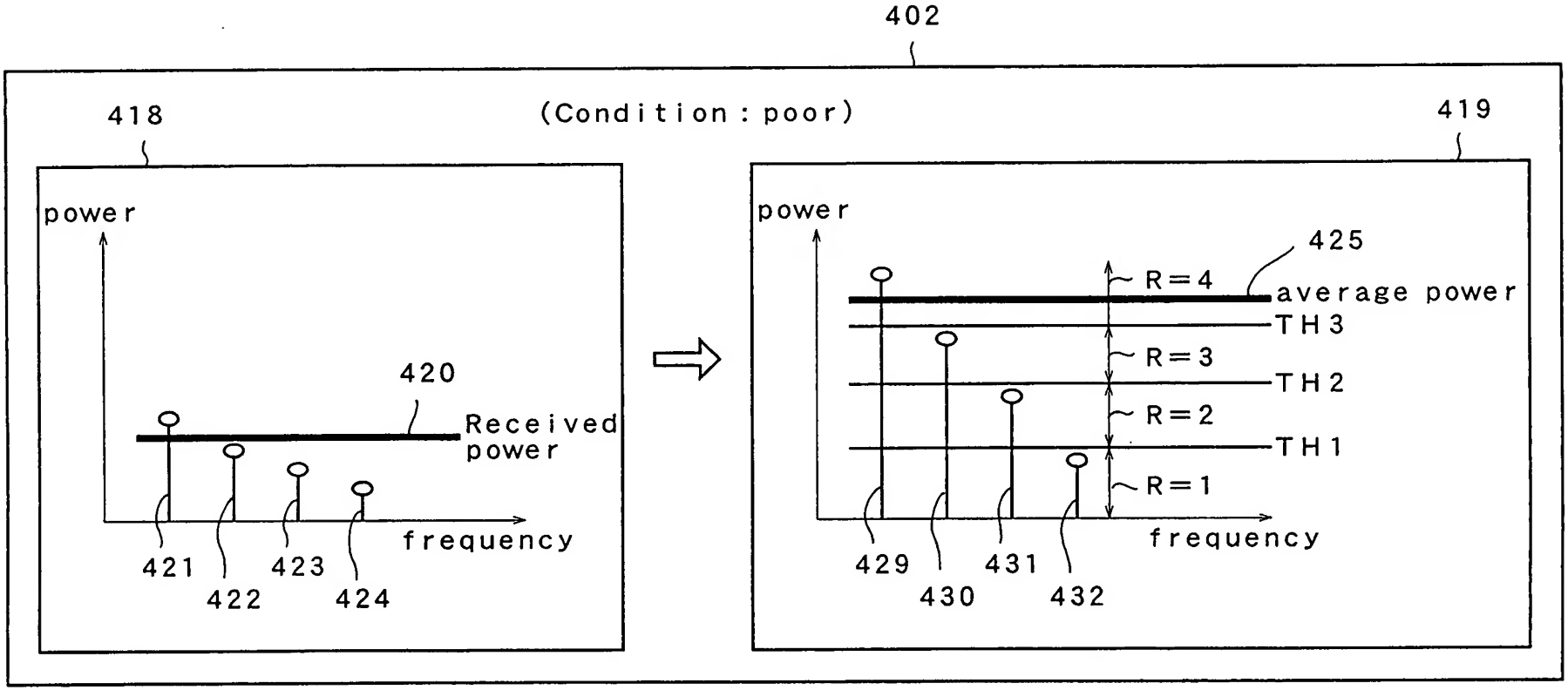


FIG. 7

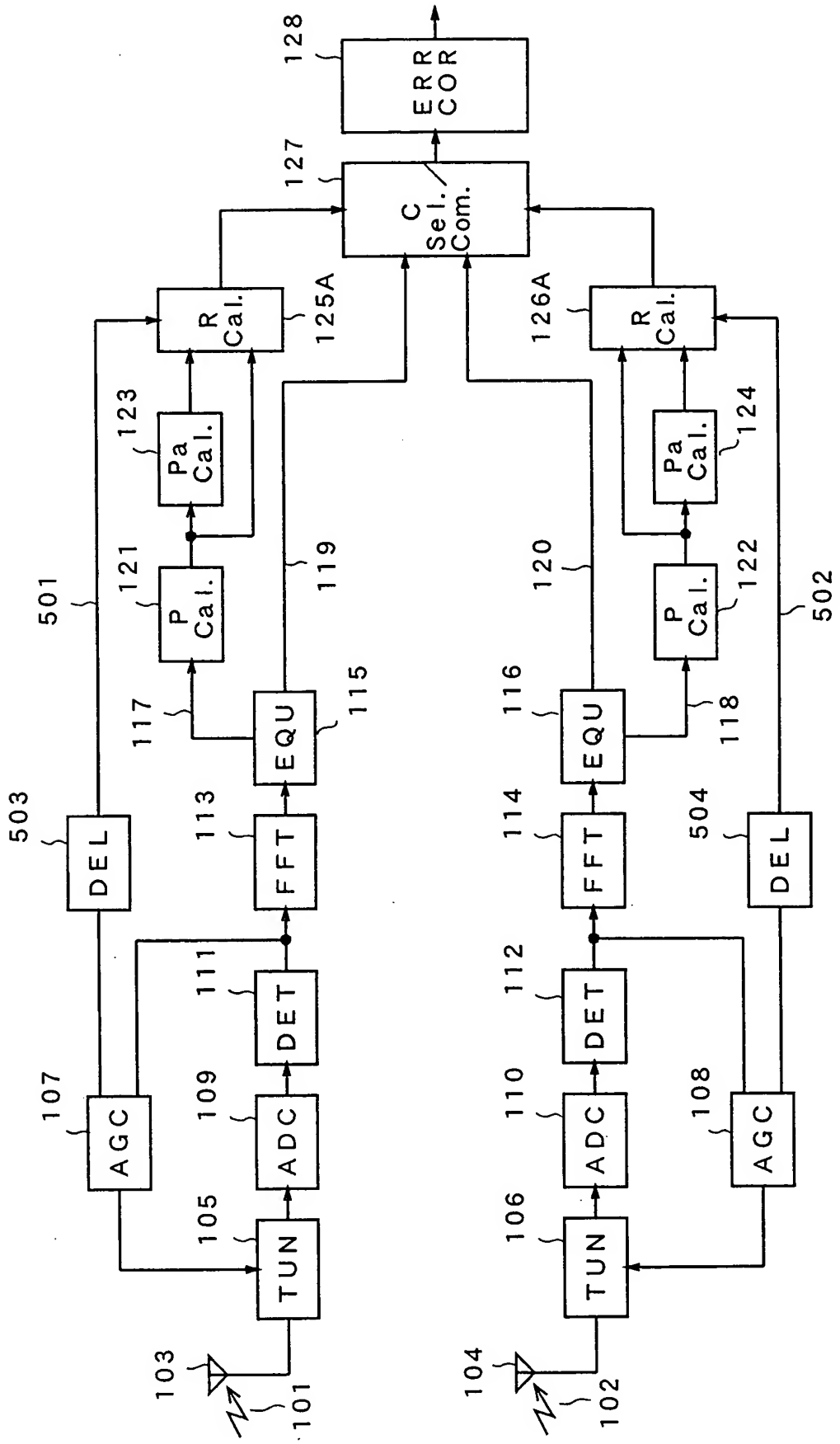

101
102
103
104
105
106
107
108
109
110
111
112
113
114
115
116
117
118
119
120
121
122
123
124
125A
126A
127
128
501
502
503
504
TUN
AGC
ADC
DET
FFT
EQU
DEL
P Cal.
Pa Cal.
R Cal.
C Sel. Com.
ERR COR

FIG. 8

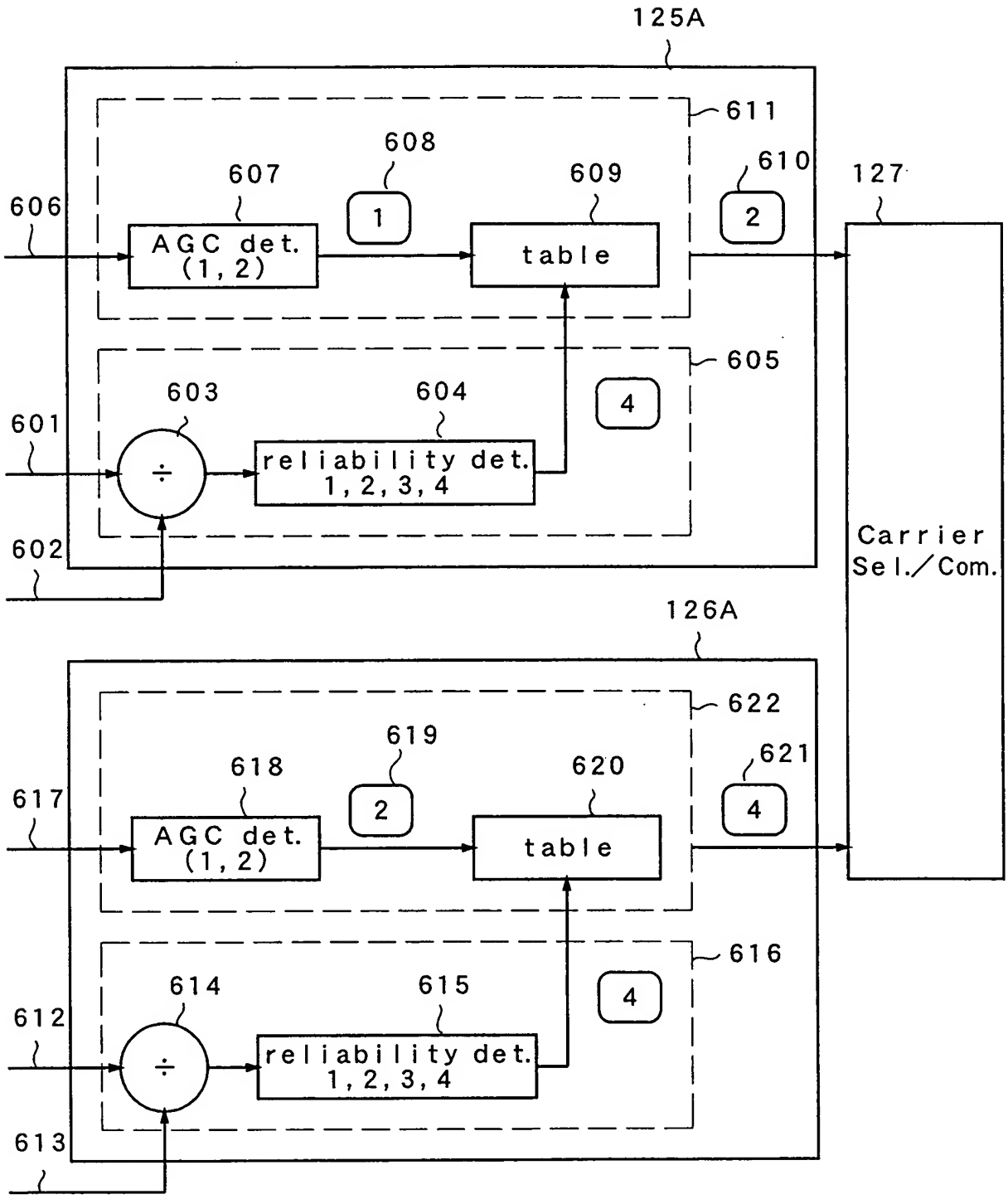

125A
611
608
607
609
610
606
AGC det.
(1, 2)
1
table
2
127
605
603
604
4
601
÷
reliability det.
1, 2, 3, 4
602
Carrier
Sel./Com.
126A
622
619
618
620
621
617
AGC det.
(1, 2)
2
table
4
616
614
615
4
612
÷
reliability det.
1, 2, 3, 4
613

FIG. 9A

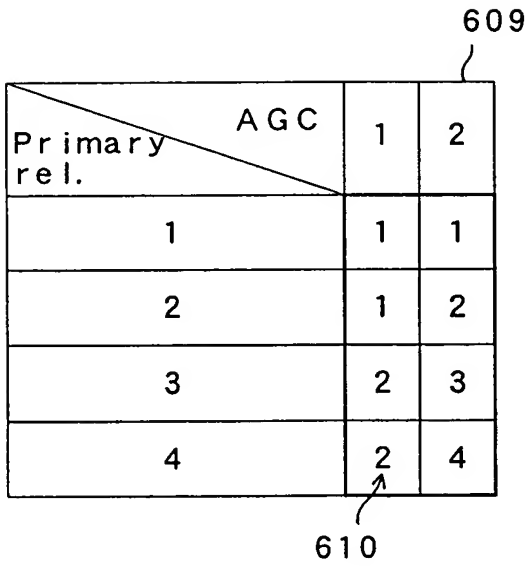

609
AGC
Primary rel.
1
2
1
1
1
2
1
2
3
2
3
4
2
4
610

FIG. 9B

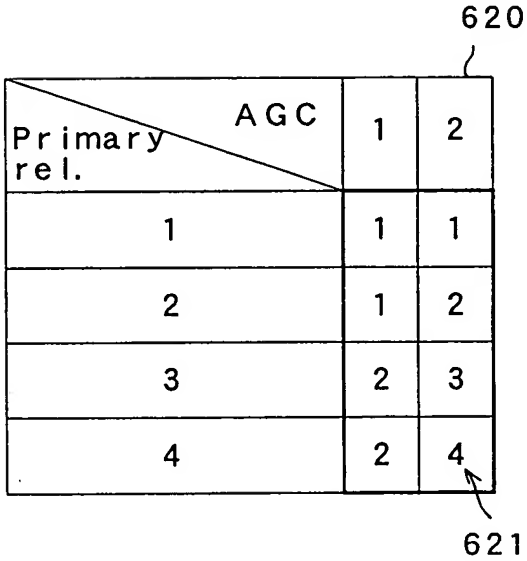

620
AGC
Primary rel.
1
2
1
1
1
2
1
2
3
2
3
4
2
4
621

FIG. 10

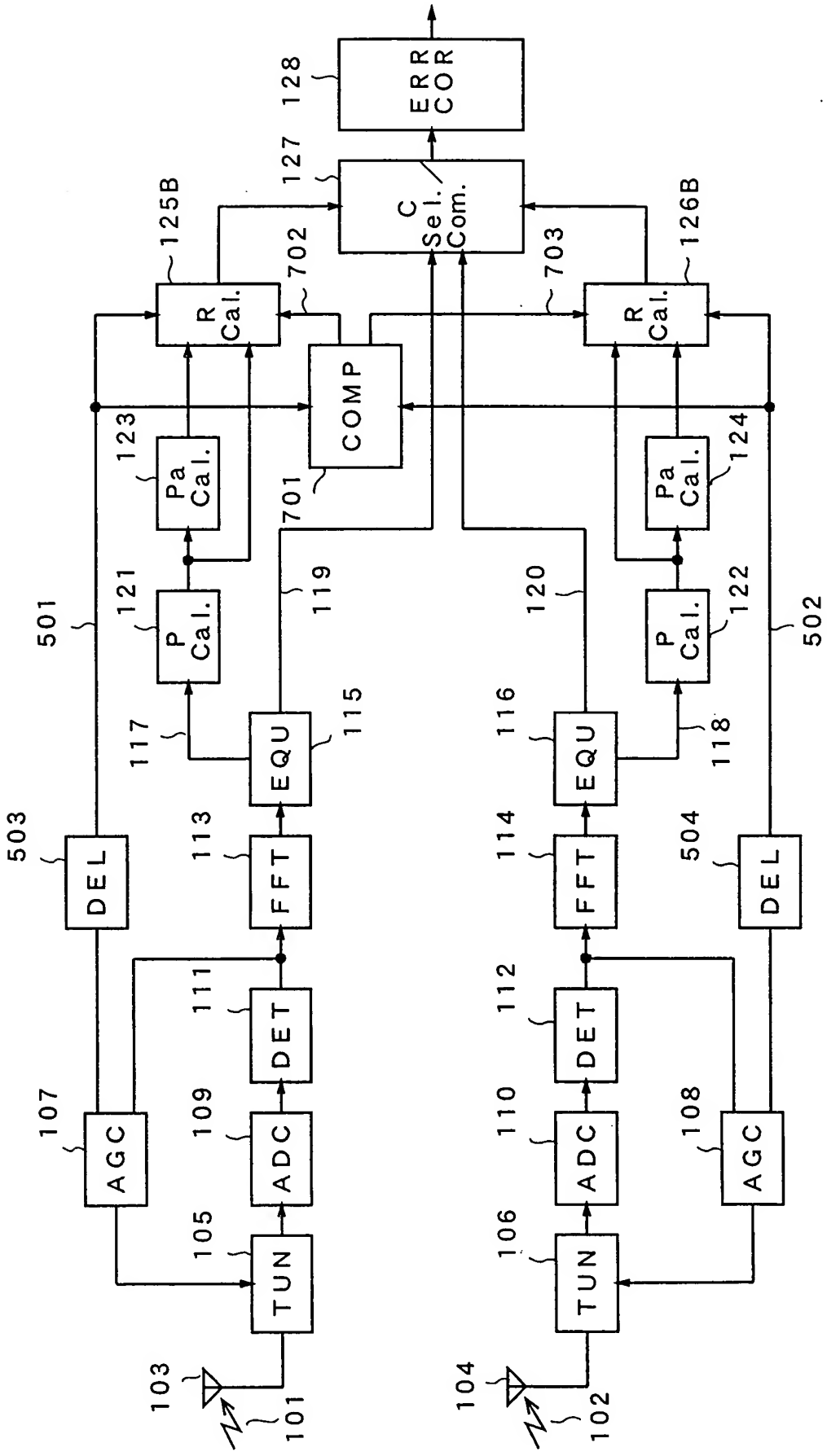

101
102
103
104
105
106
107
108
109
110
111
112
113
114
115
116
117
118
119
120
121
122
123
124
125B
126B
127
128
501
502
503
504
701
702
703
TUN
AGC
ADC
DET
FFT
EQU
DEL
P Cal.
Pa Cal.
R Cal.
COMP
C Sel. Com.
ERR COR

FIG. 11

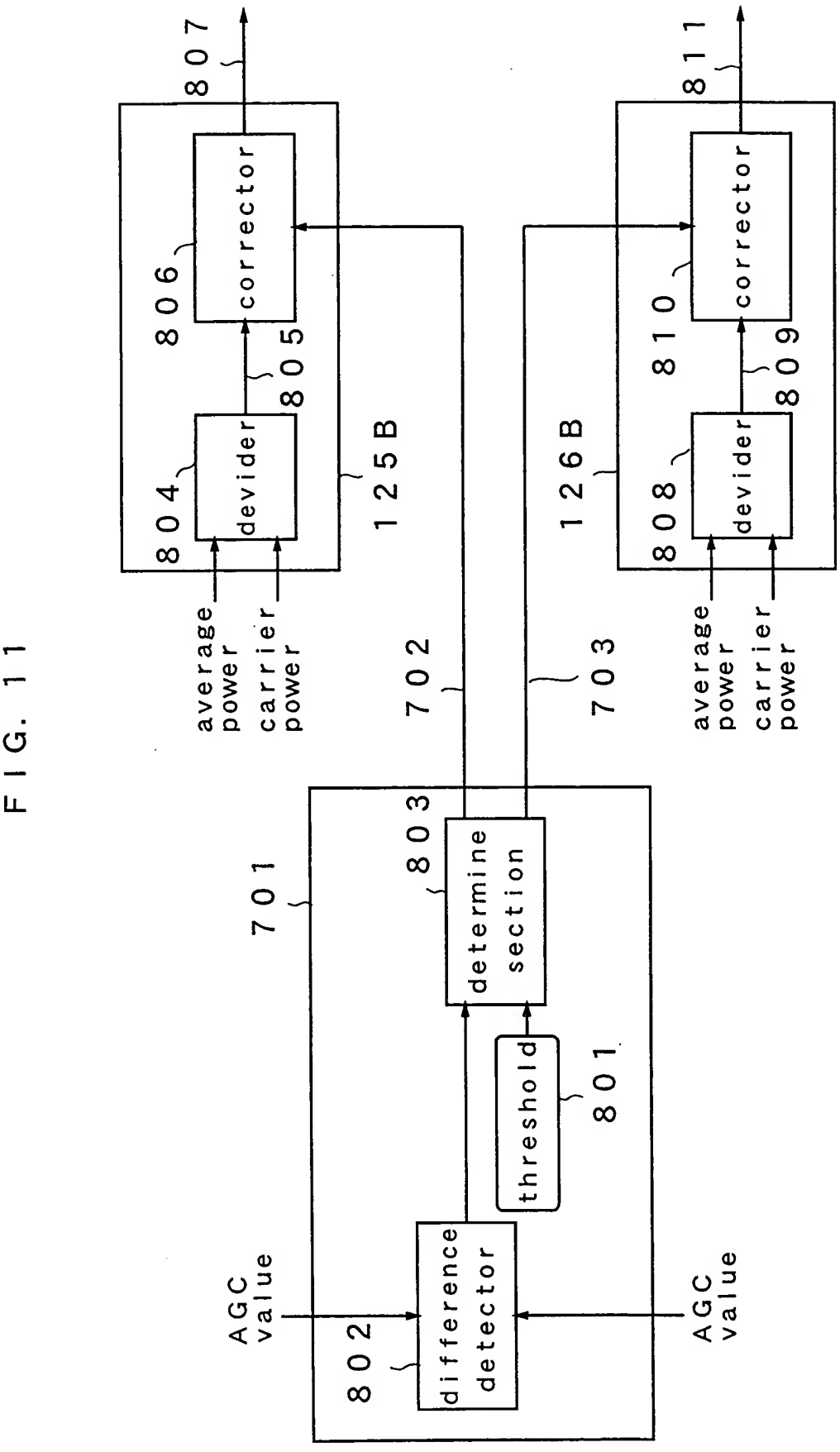

701
802
difference detector
AGC value
801
threshold
803
determine section
702
703
AGC value
804
devider
805
806
corrector
807
125B
average power
carrier power
808
devider
809
810
corrector
811
126B
average power
carrier power

FIG. 12

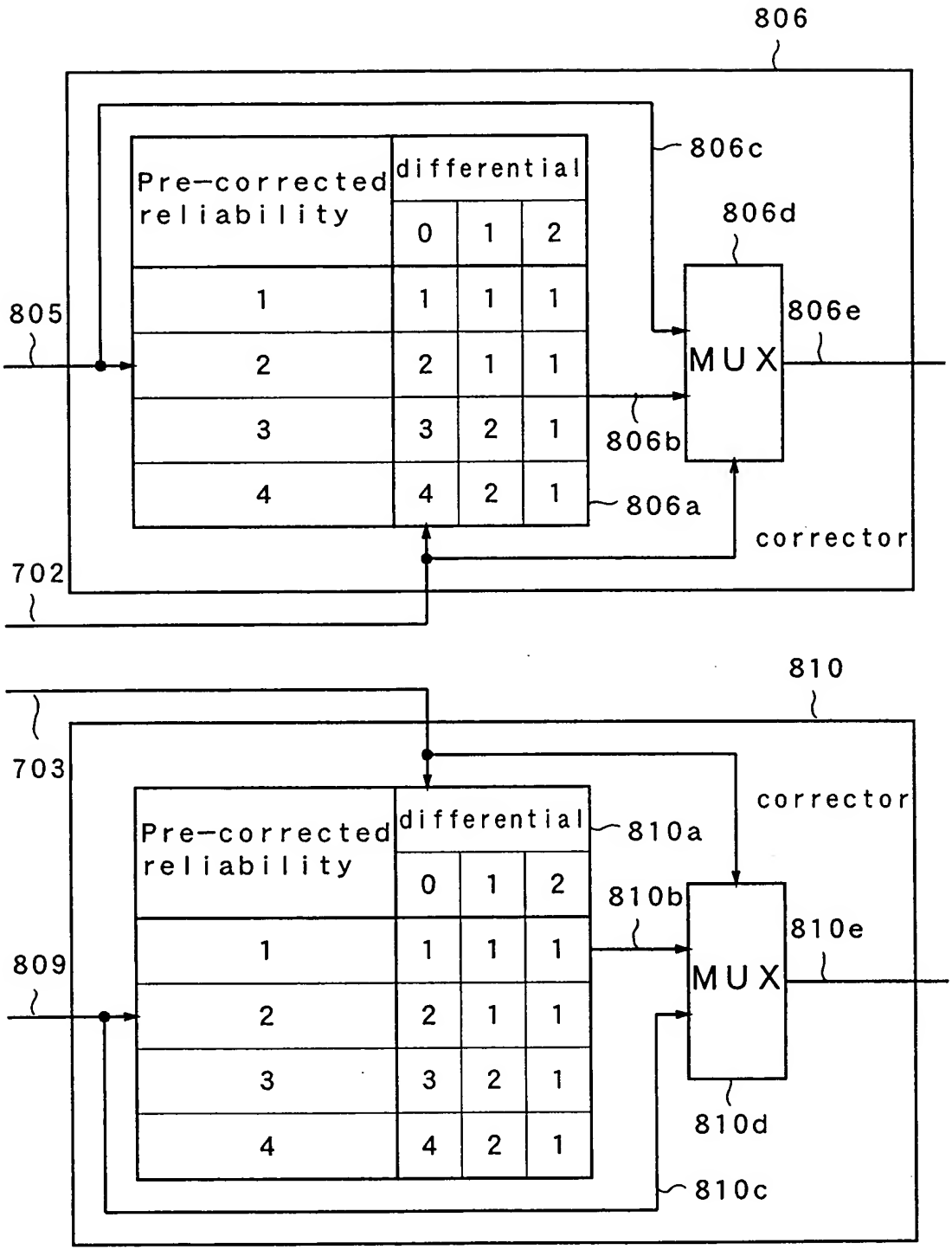
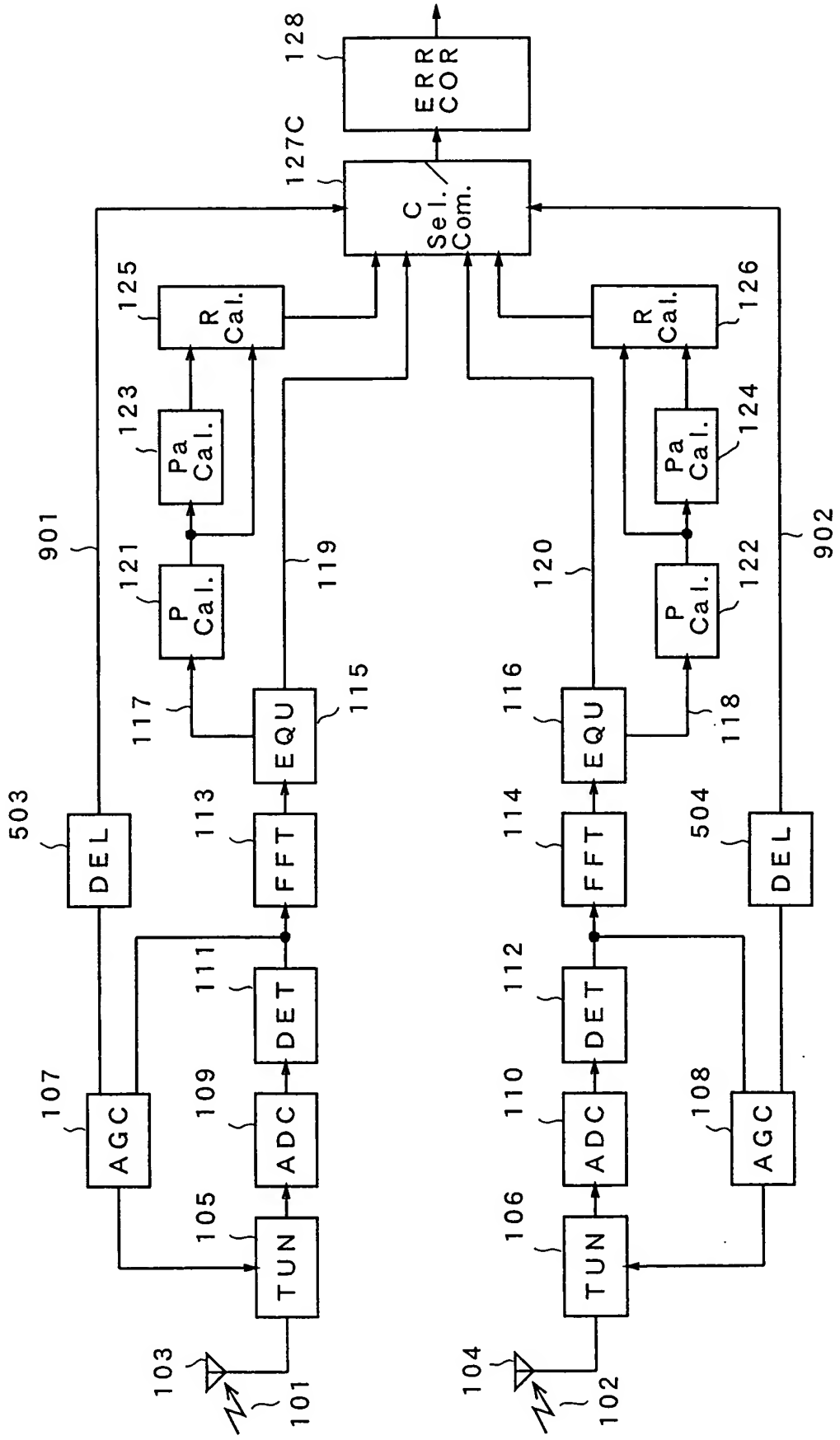

806
806c
806d
806e
805
MUX
806b
806a
corrector
702
Pre-corrected reliability
differential
0
1
2
1
1
1
1
2
1
1
3
2
1
4
4
2
1
810
703
corrector
Pre-corrected reliability
differential
810a
0
1
2
810b
810e
809
MUX
1
1
1
1
2
1
1
3
2
1
4
4
2
1
810d
810c

FIG. 13


101
102
103
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107
108
109
110
111
112
113
114
115
116
117
118
119
120
121
122
123
124
125
126
127C
128
901
902
503
504
TUN
ADC
AGC
DET
FFT
EQU
DEL
P Cal.
Pa Cal.
R Cal.
C Sel. Com.
ERR COR

FIG. 14

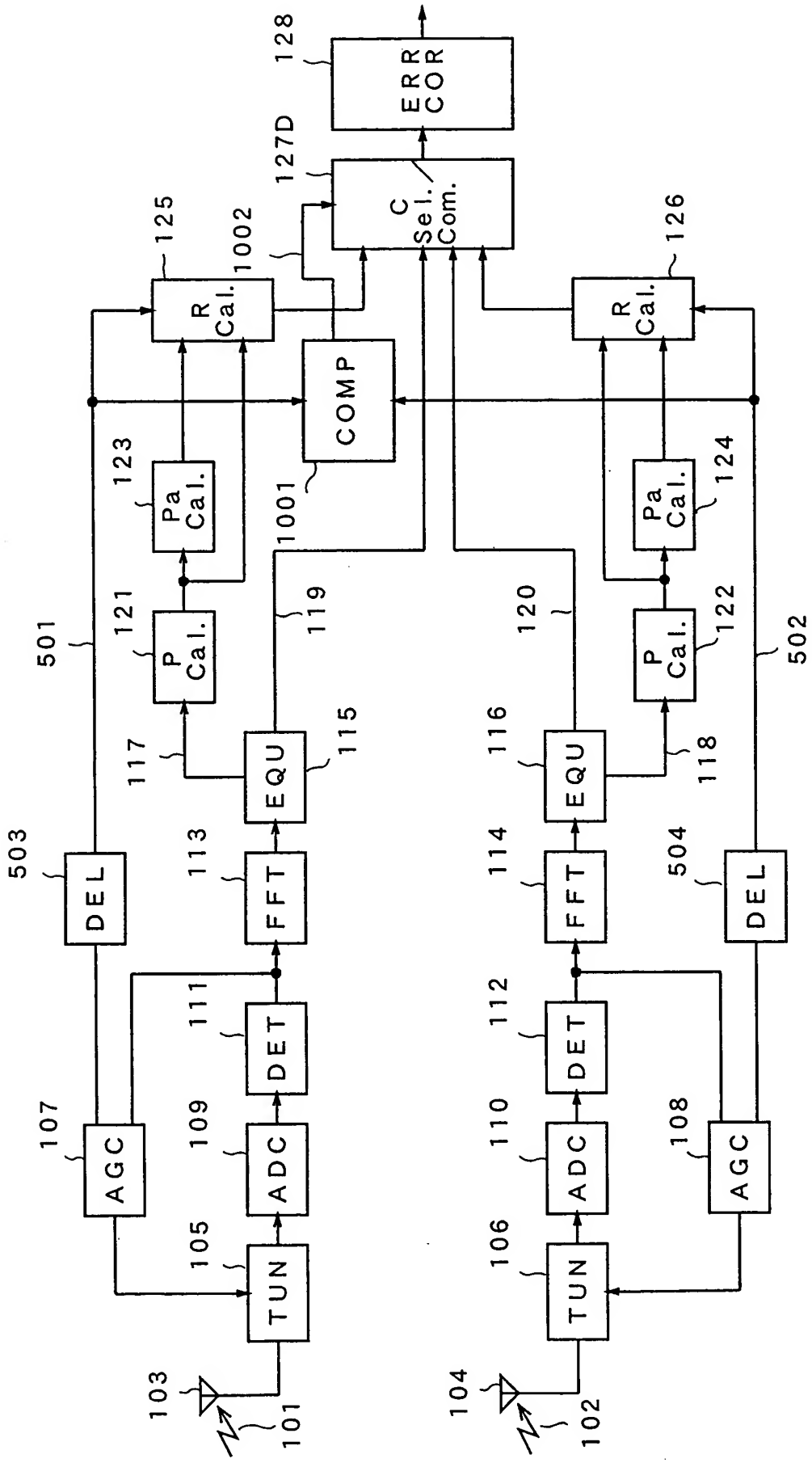

ERR COR
128
C Sel. Com.
127D
1002
R Cal.
125
R Cal.
126
COMP
1001
Pa Cal.
123
Pa Cal.
124
P Cal.
121
P Cal.
122
501
502
119
120
EQU
115
EQU
116
117
118
DEL
503
FFT
113
FFT
114
504
DEL
DET
111
DET
112
AGC
107
ADC
109
ADC
110
AGC
108
TUN
105
TUN
106
103
104
101
102

FIG. 15

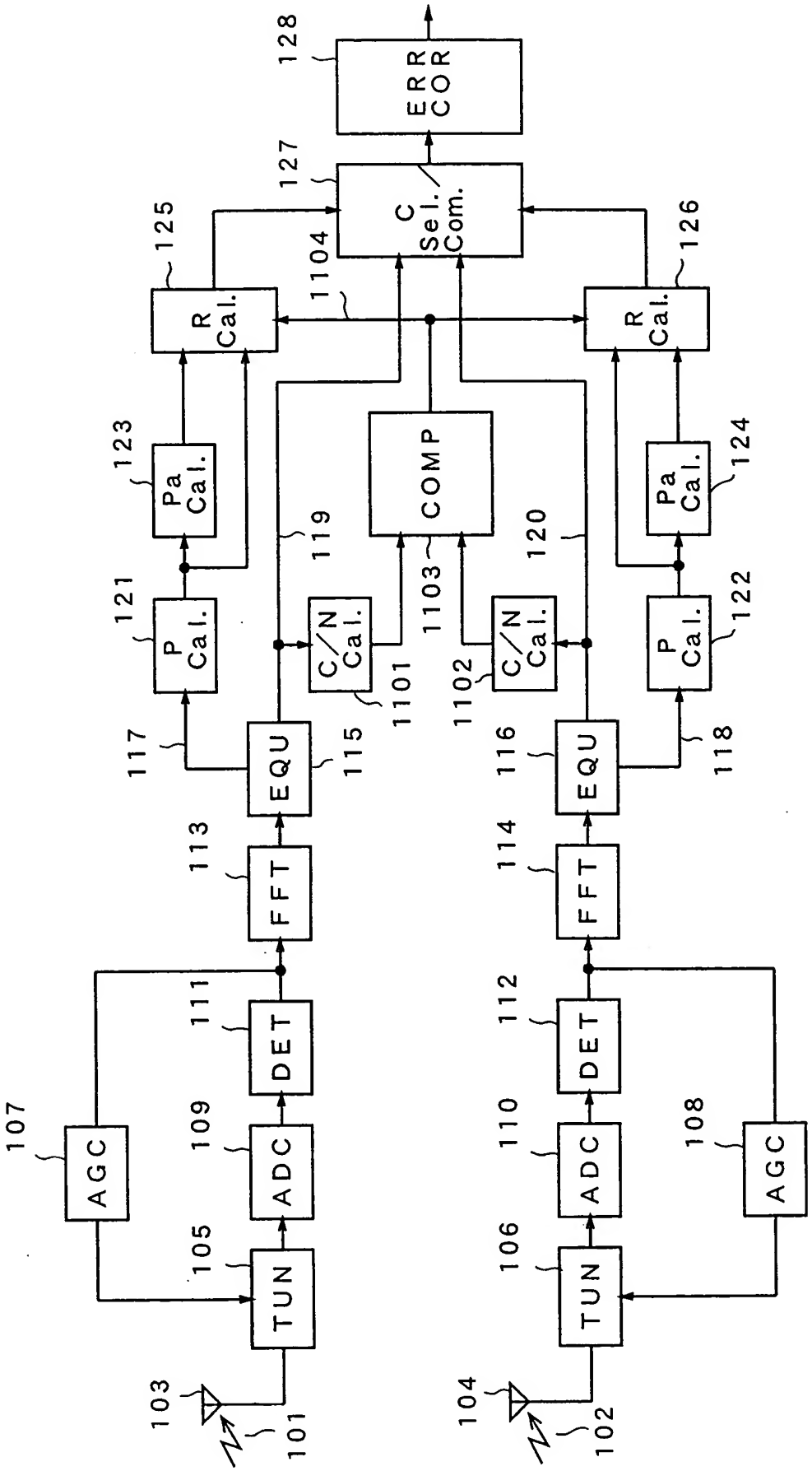

101
102
103
104
105
106
107
108
109
110
111
112
113
114
115
116
117
118
119
120
121
122
123
124
125
126
127
128
1101
1102
1103
1104
TUN
AGC
ADC
DET
FFT
EQU
C/N Cal.
P Cal.
Pa Cal.
R Cal.
COMP
C Sel. Com.
ERR COR

FIG. 16

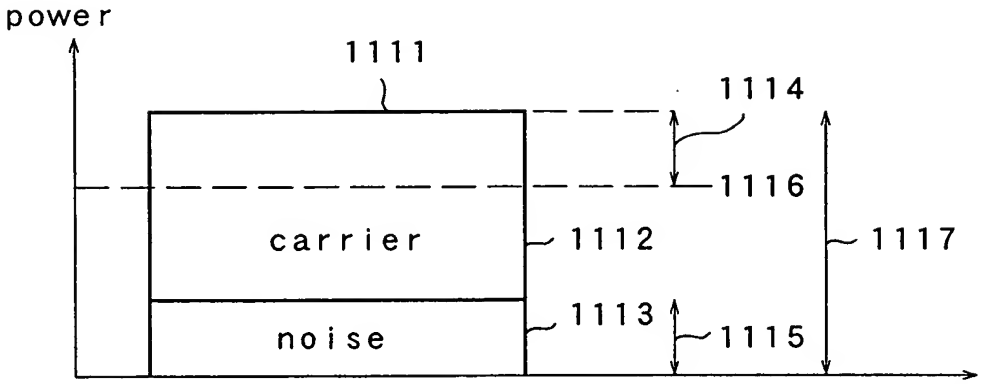


FIG. 17

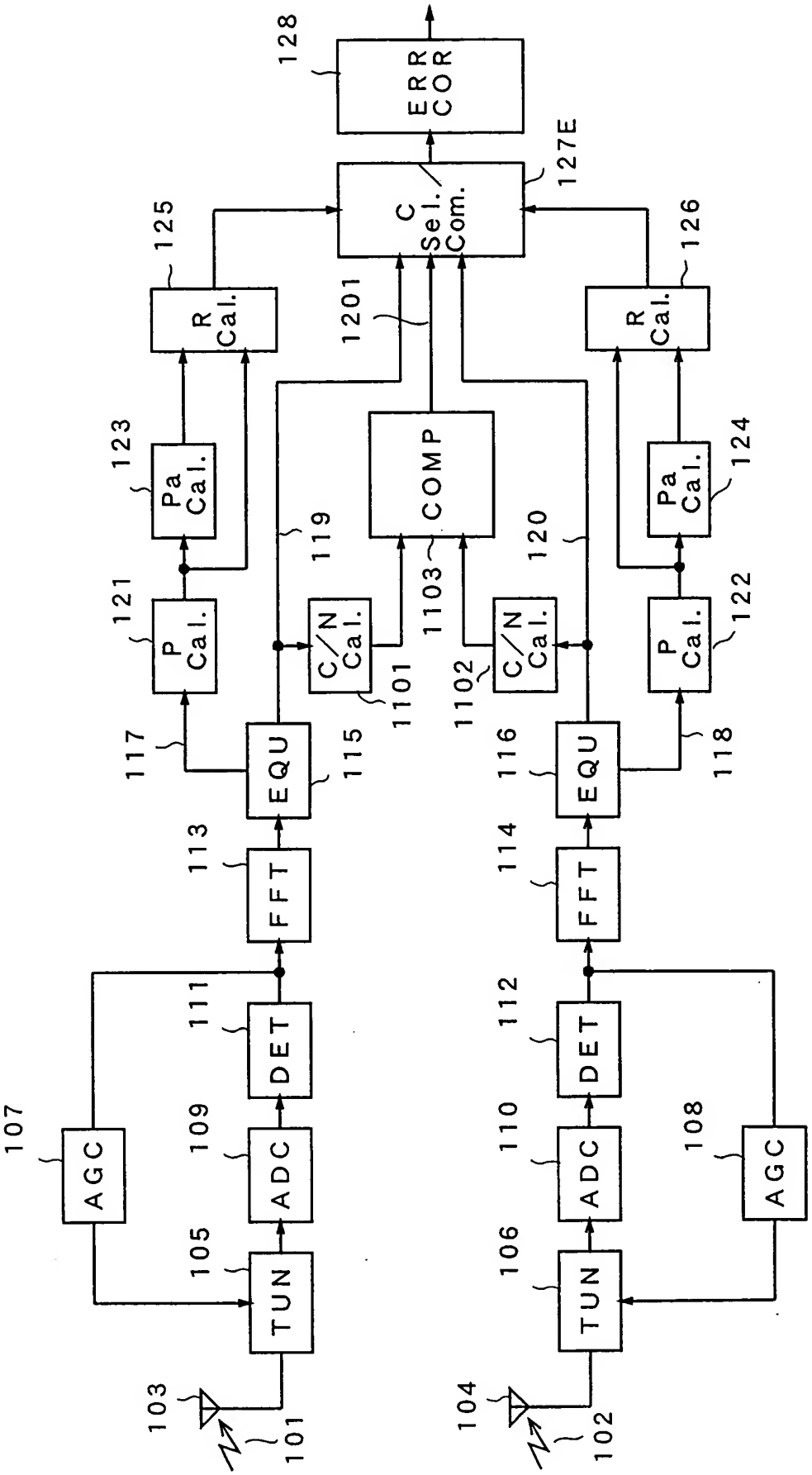

TUN
AGC
ADC
DET
FFT
EQU
P Cal.
C/N Cal.
Pa Cal.
R Cal.
COMP
C Sel. Com.
ERR COR
101
102
103
104
105
106
107
108
109
110
111
112
113
114
115
116
117
118
119
120
121
122
123
124
125
126
127E
128
1101
1102
1103
1201

FIG. 18

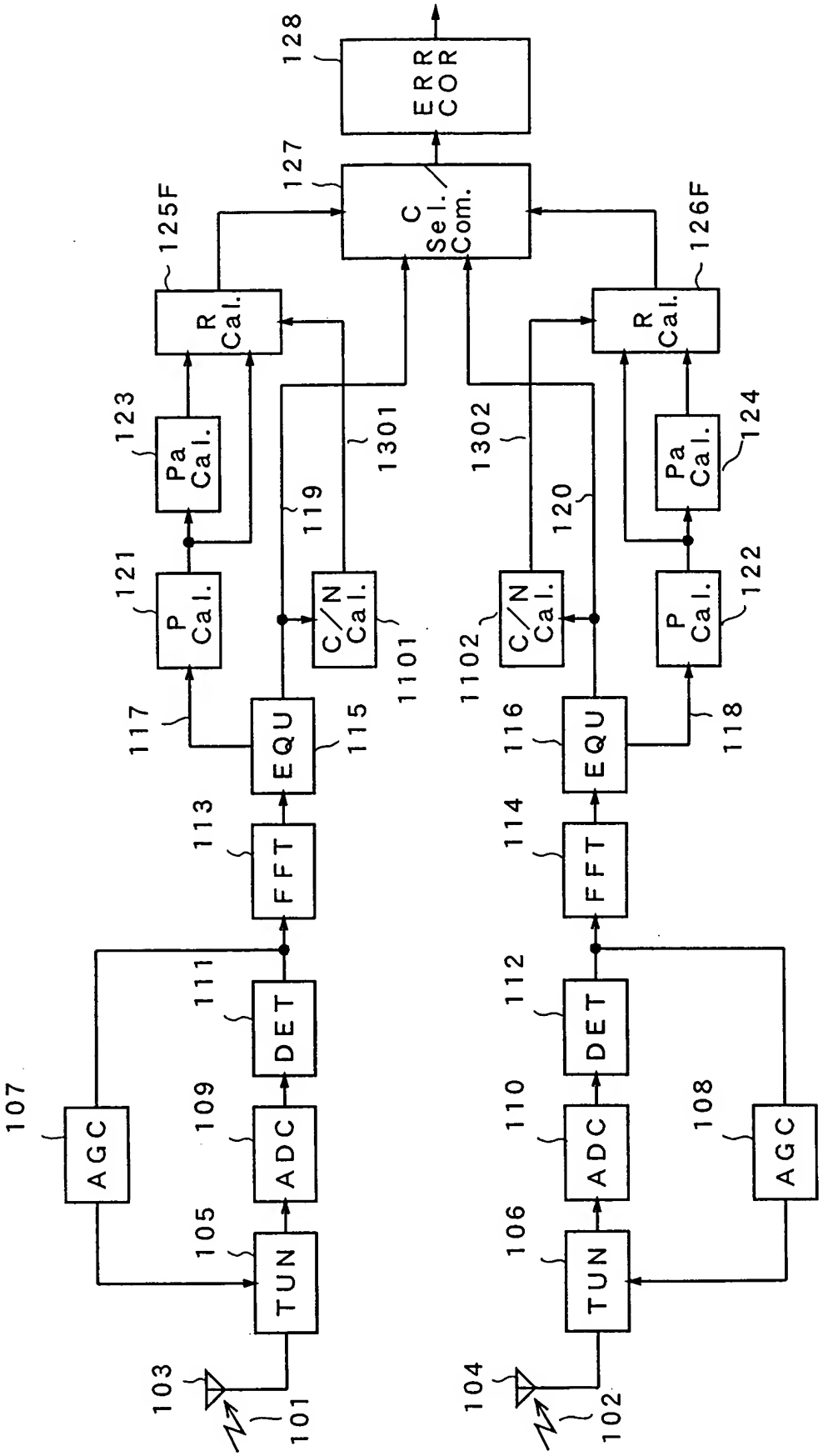

101
102
103
104
105
106
107
108
109
110
111
112
113
114
115
116
117
118
119
120
121
122
123
124
125F
126F
127
128
1101
1102
1301
1302
TUN
AGC
ADC
DET
FFT
EQU
P Cal.
Pa Cal.
R Cal.
C/N Cal.
C Sel. Com.
ERR COR

FIG. 19

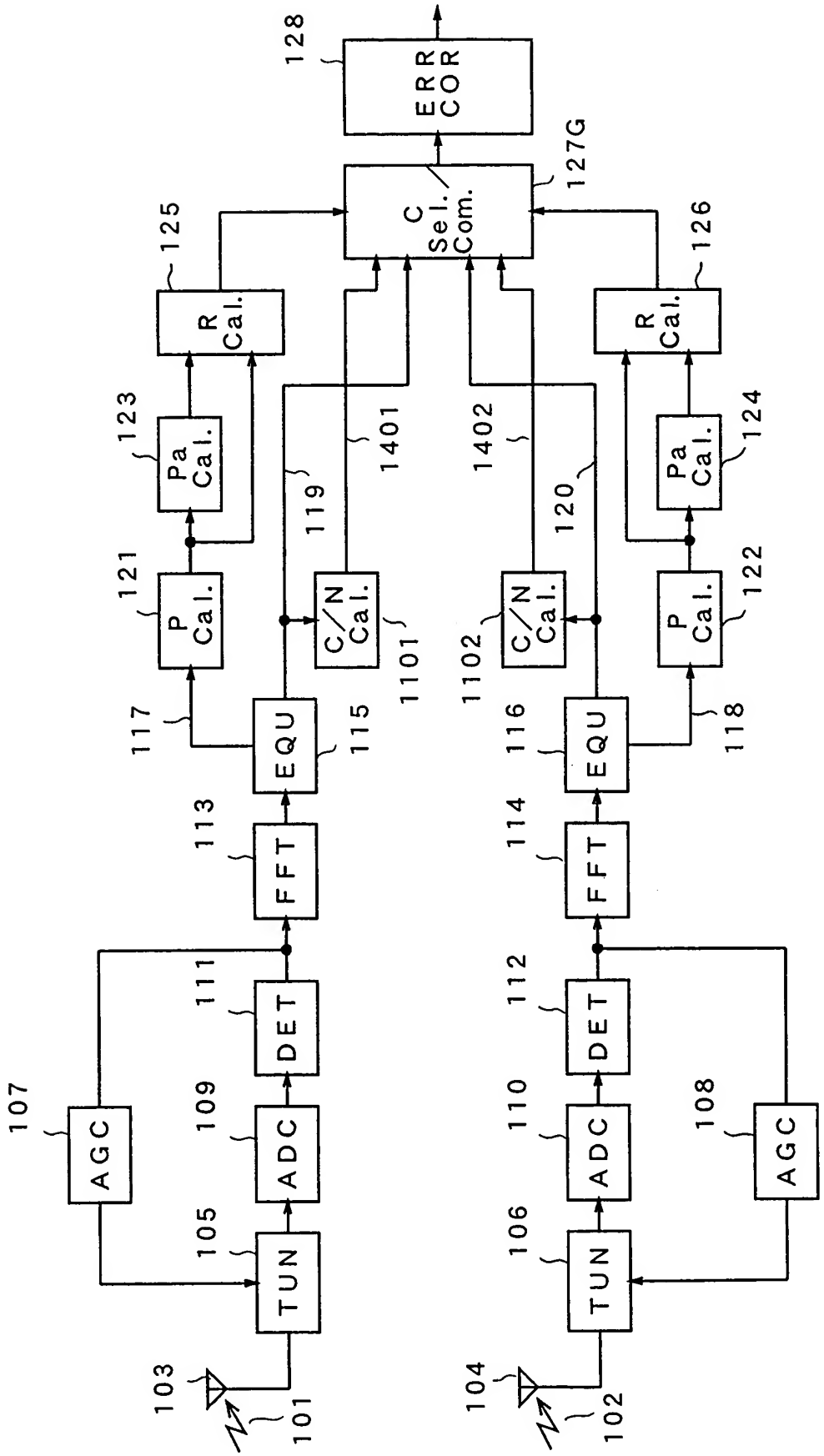

101
102
103
104
105
106
107
108
109
110
111
112
113
114
115
116
117
118
119
120
121
122
123
124
125
126
127G
128
1101
1102
1401
1402
TUN
AGC
ADC
DET
FFT
EQU
P Cal.
Pa Cal.
R Cal.
C/N Cal.
C Sel. Com.
ERR COR

FIG. 20

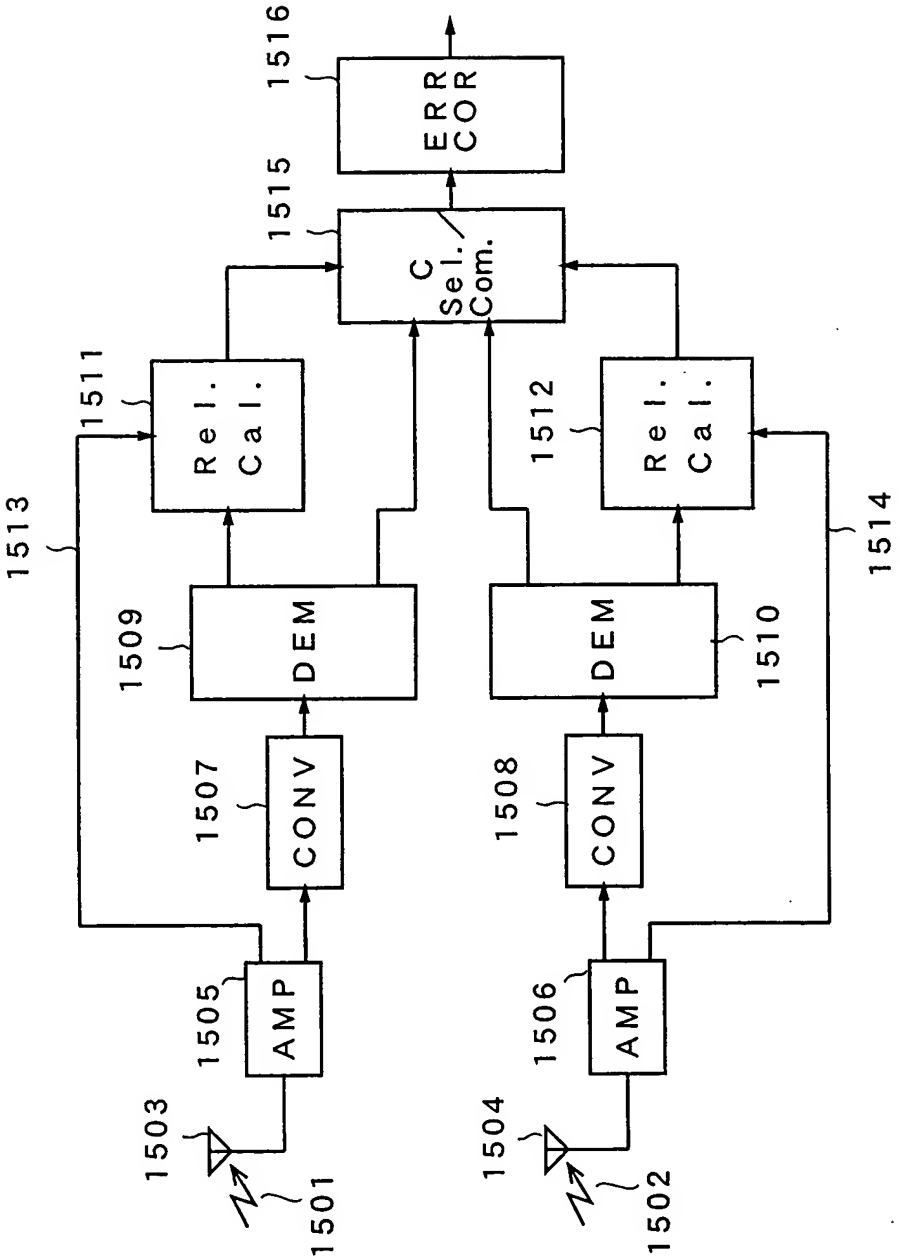

1501
1502
1503
1504
AMP
1505
AMP
1506
CONV
1507
CONV
1508
DEM
1509
DEM
1510
Rel. Cal.
1511
Rel. Cal.
1512
1513
1514
C Sel. Com.
1515
ERR COR
1516

FIG. 21

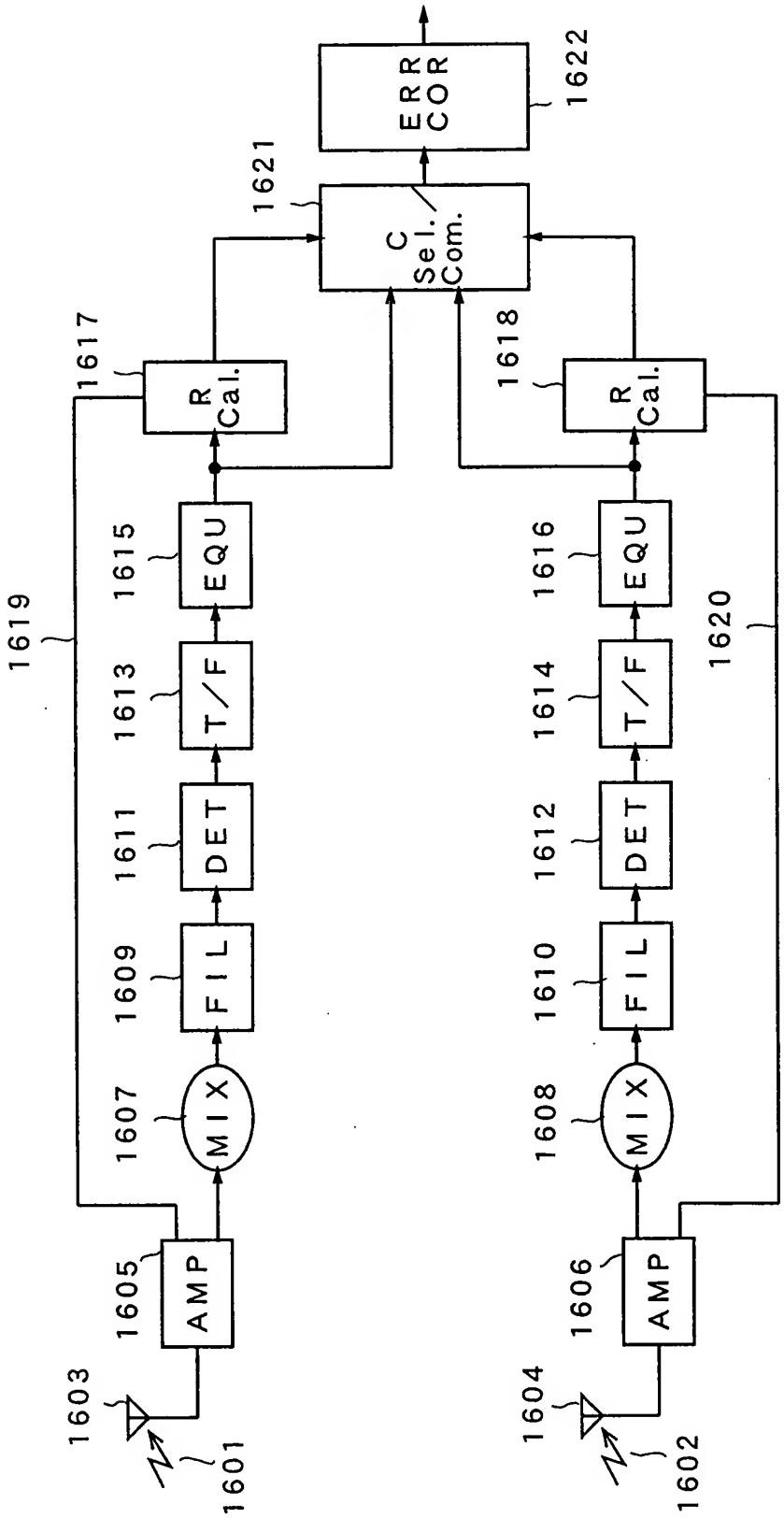

1601
1602
1603
1604
AMP
1605
1606
MIX
1607
1608
FIL
1609
1610
DET
1611
1612
T/F
1613
1614
EQU
1615
1616
R Cal.
1617
1618
1619
1620
C Sel. Com.
1621
ERR COR
1622

FIG. 22

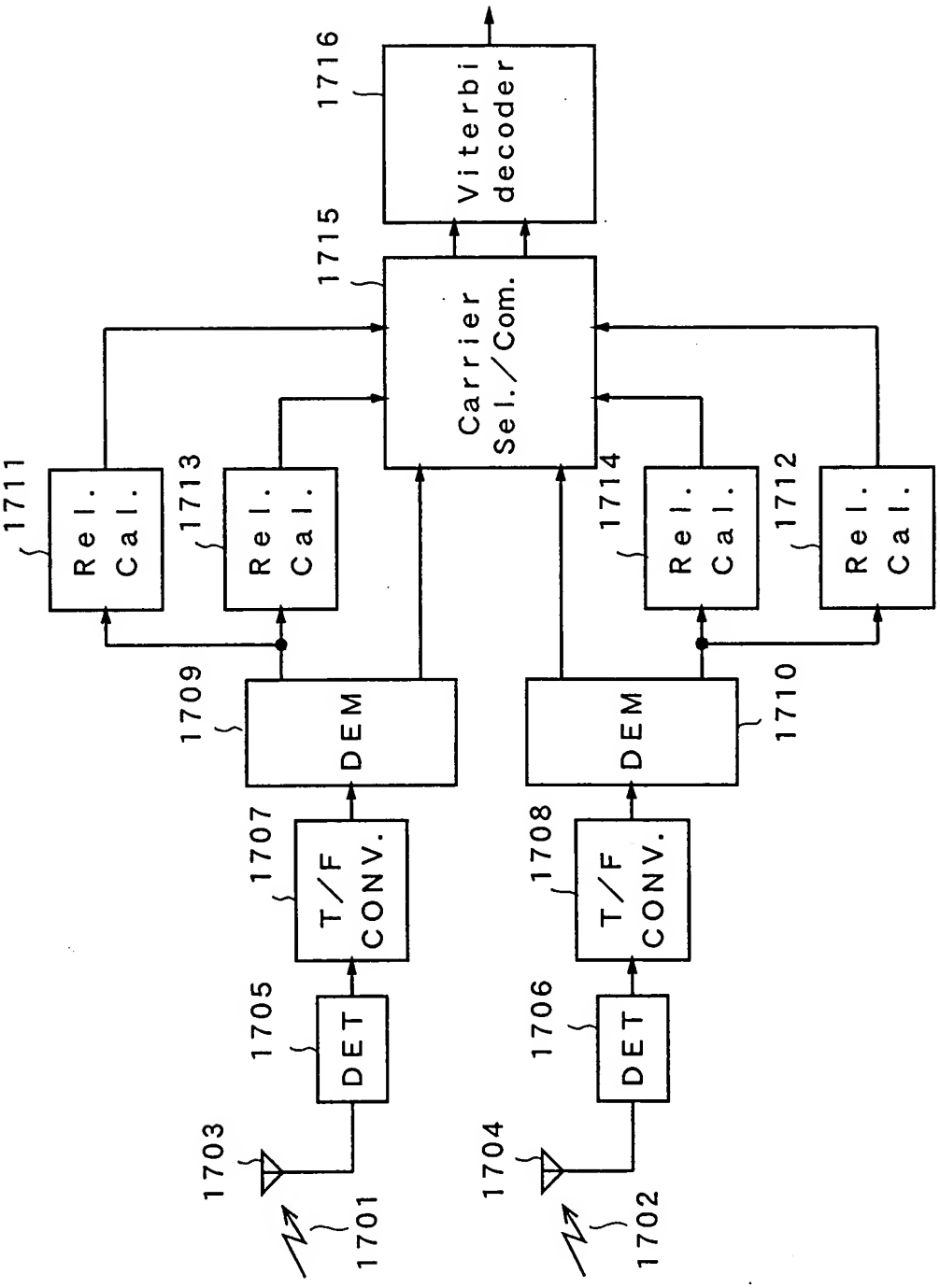

1701
1702
1703
1704
DET
1705
DET
1706
T/F CONV.
1707
T/F CONV.
1708
DEM
1709
DEM
1710
Rel. Cal.
1711
Rel. Cal.
1712
Rel. Cal.
1713
Rel. Cal.
1714
Carrier Sel./Com.
1715
Viterbi decoder
1716

FIG. 23

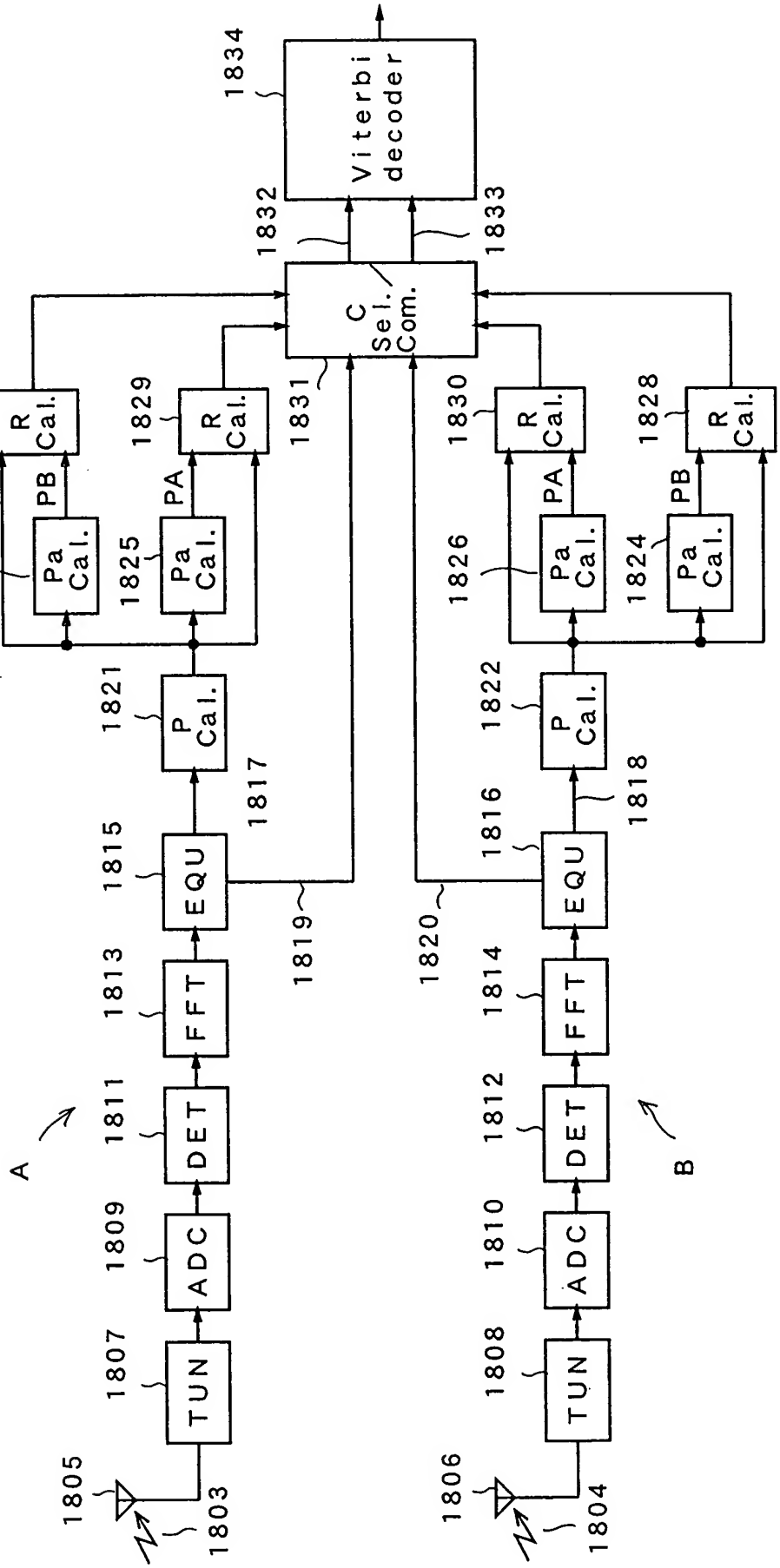

1834
Viterbi decoder
1832
1833
C Sel. Com.
1831
1827
R Cal.
1829
R Cal.
1830
R Cal.
1828
R Cal.
PB
PA
PA
PB
1823
Pa Cal.
1825
Pa Cal.
1826
Pa Cal.
1824
Pa Cal.
1821
P Cal.
1822
P Cal.
1817
1818
1815
EQU
1816
EQU
1819
1820
1813
FFT
1814
FFT
1811
DET
1812
DET
A
B
1809
ADC
1810
ADC
1807
TUN
1808
TUN
1805
1806
1803
1804

FIG. 24A

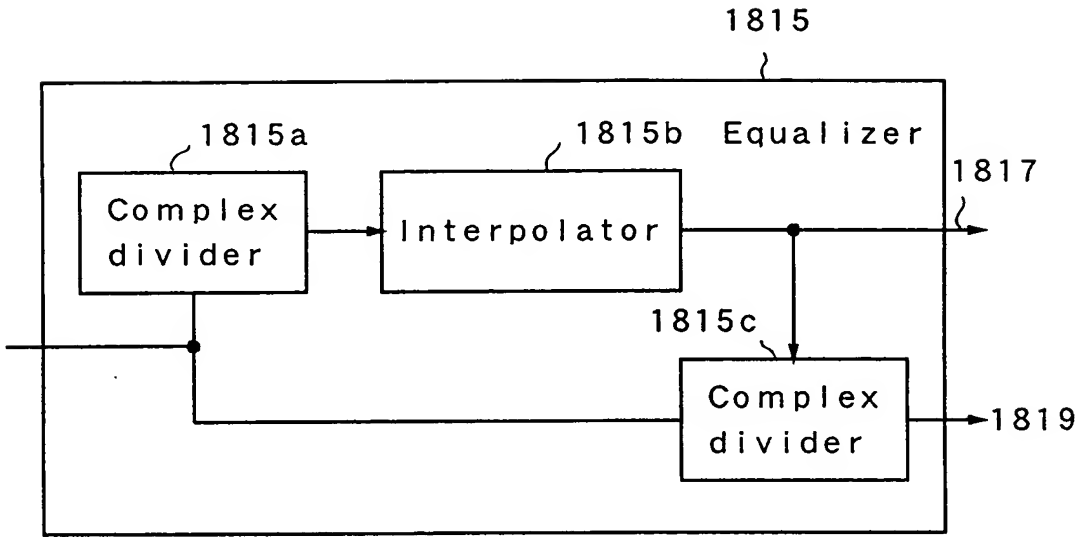


FIG. 24B

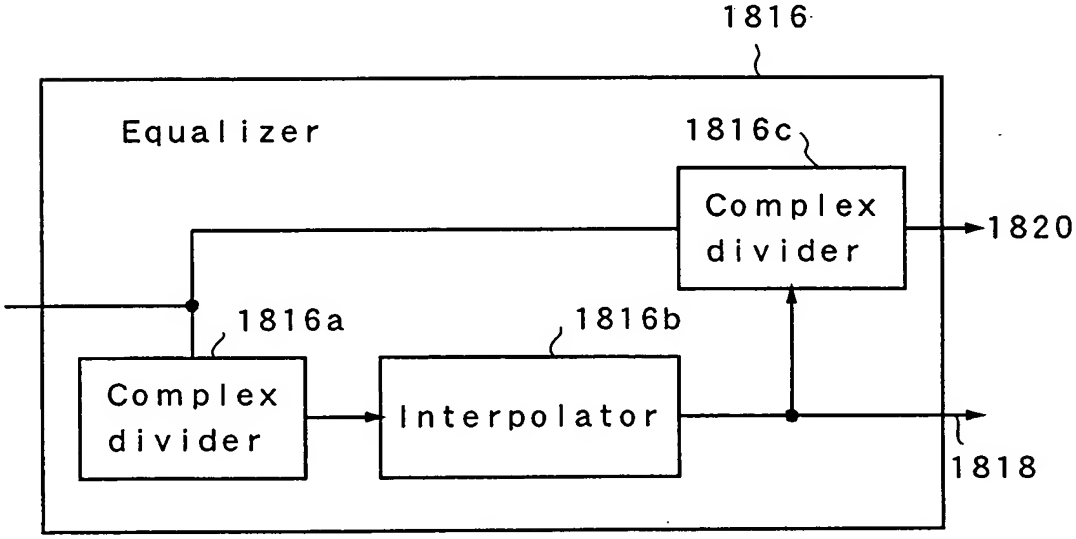


FIG. 25

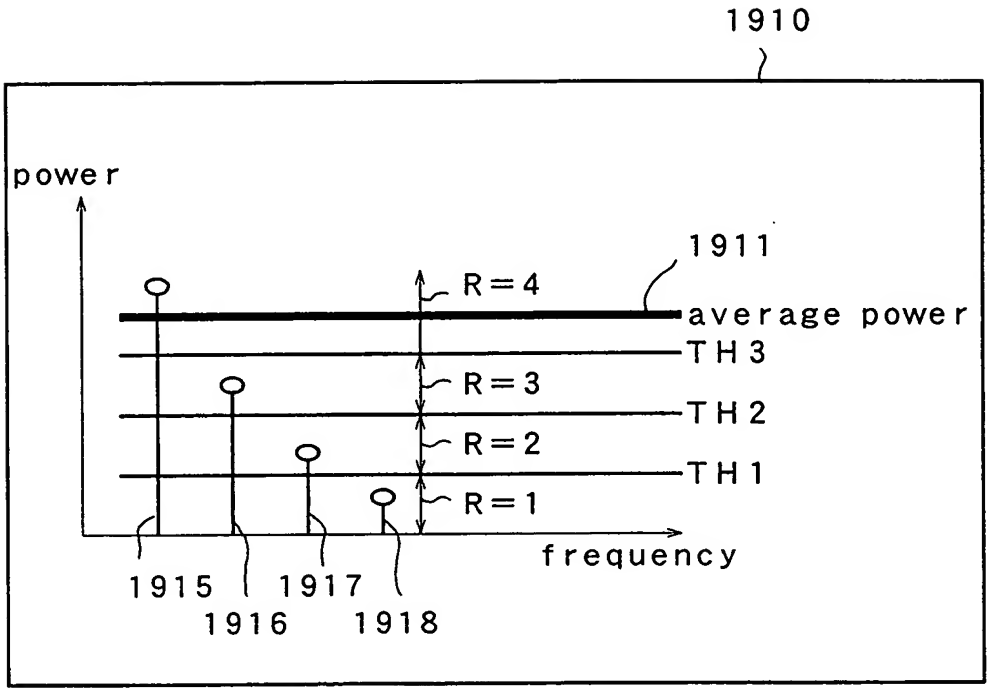

1910
power
1911
R=4
average power
TH3
R=3
TH2
R=2
TH1
R=1
frequency
1915
1916
1917
1918

FIG. 26

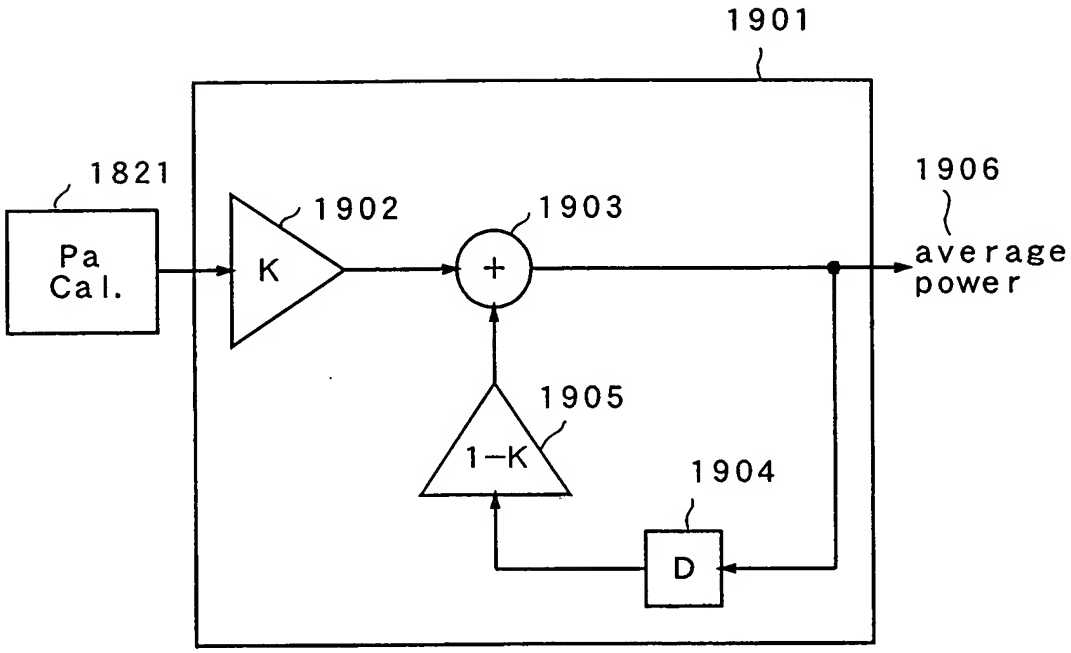


FIG. 27

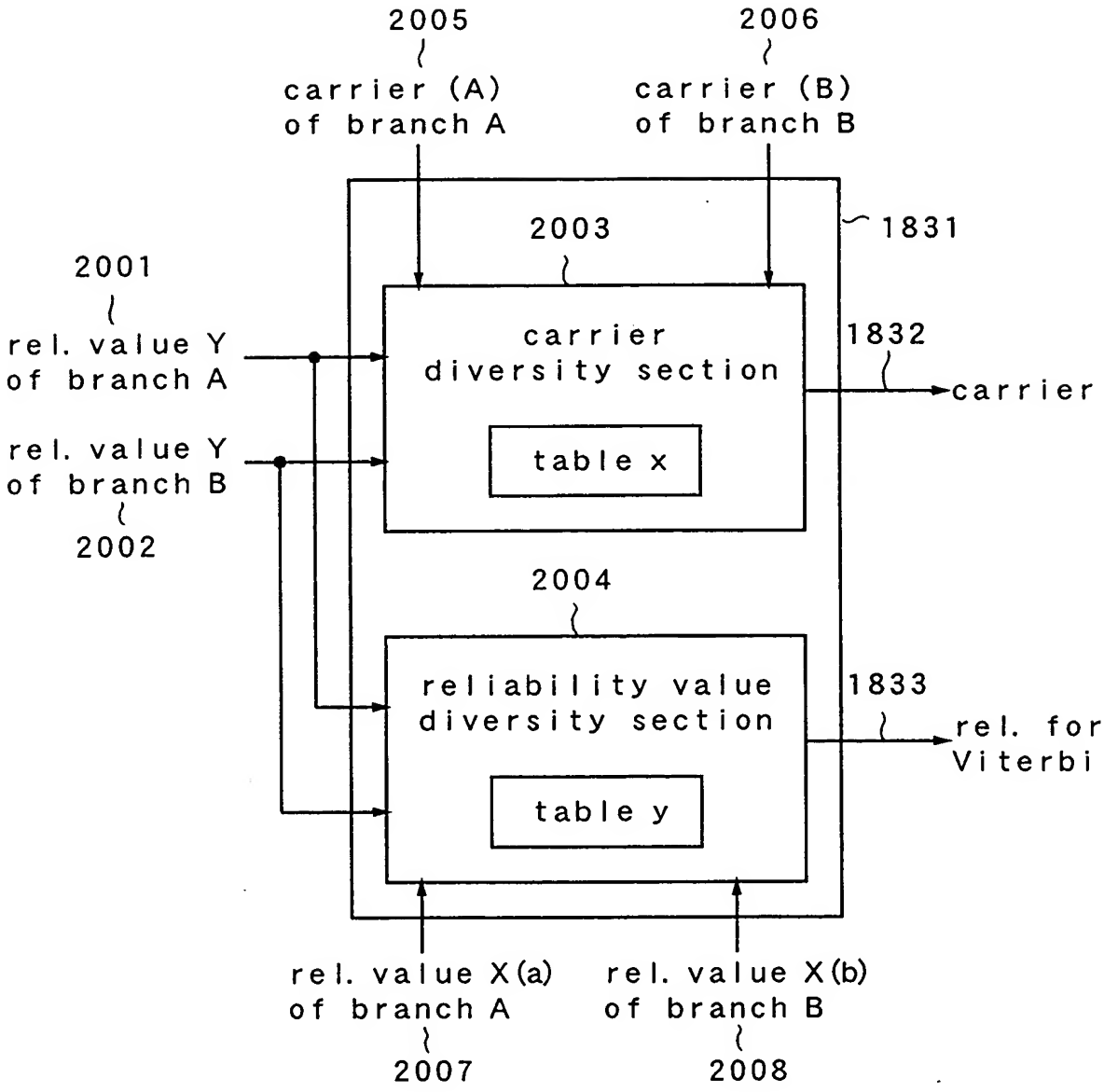
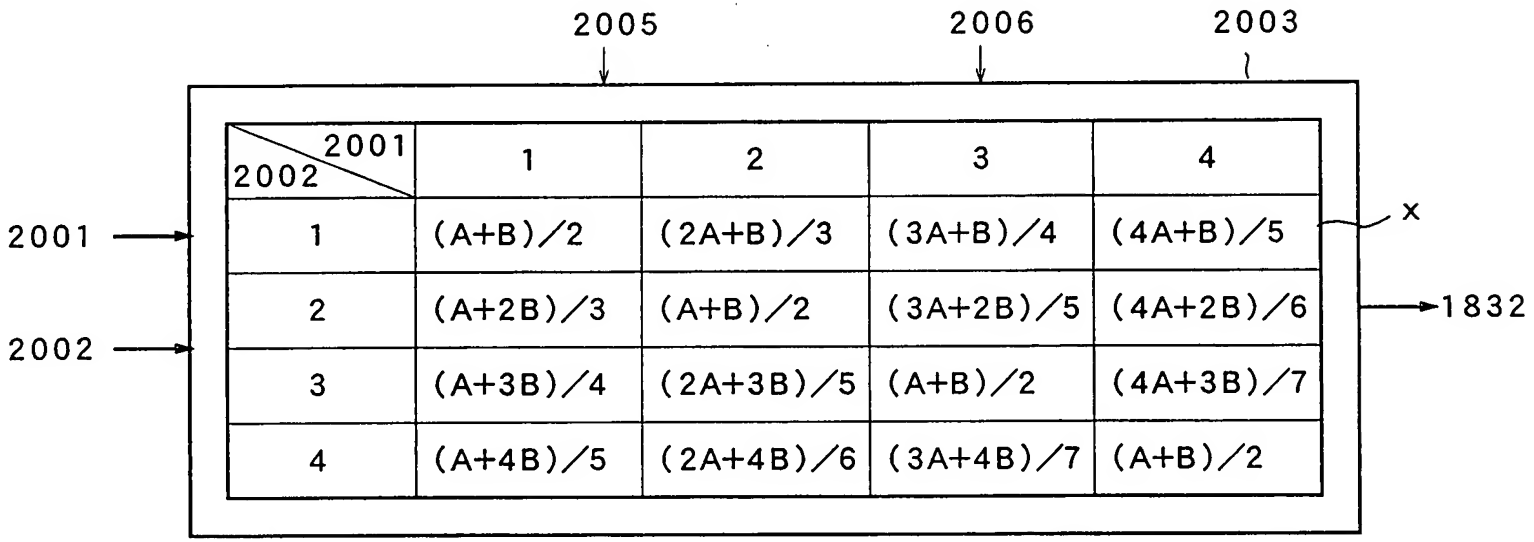
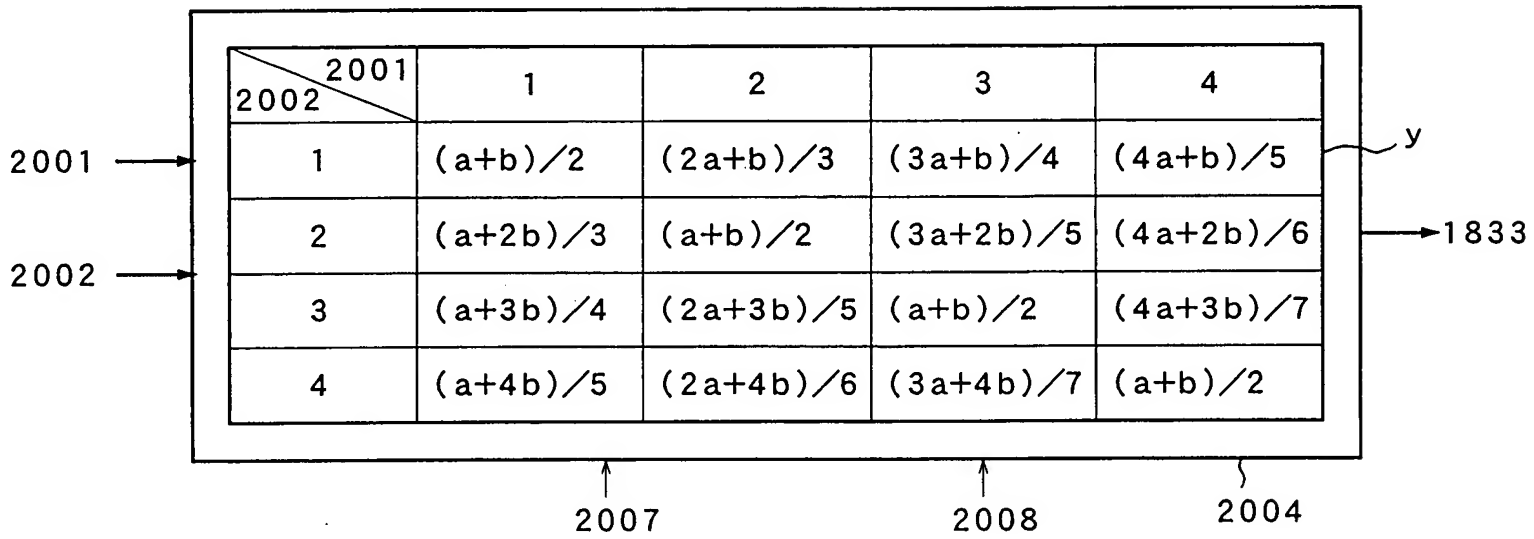

2005
carrier (A)
of branch A
2006
carrier (B)
of branch B
1831
2003
2001
rel. value Y
of branch A
carrier
diversity section
1832
carrier
rel. value Y
of branch B
table x
2002
2004
reliability value
diversity section
1833
rel. for
Viterbi
table y
rel. value X(a)
of branch A
rel. value X(b)
of branch B
2007
2008

FIG. 28A



2002 \ 2001	1	2	3	4
1	(A+B)/2	(2A+B)/3	(3A+B)/4	(4A+B)/5
2	(A+2B)/3	(A+B)/2	(3A+2B)/5	(4A+2B)/6
3	(A+3B)/4	(2A+3B)/5	(A+B)/2	(4A+3B)/7
4	(A+4B)/5	(2A+4B)/6	(3A+4B)/7	(A+B)/2

FIG. 28B



2002 \ 2001	1	2	3	4
1	(a+b)/2	(2a+b)/3	(3a+b)/4	(4a+b)/5
2	(a+2b)/3	(a+b)/2	(3a+2b)/5	(4a+2b)/6
3	(a+3b)/4	(2a+3b)/5	(a+b)/2	(4a+3b)/7
4	(a+4b)/5	(2a+4b)/6	(3a+4b)/7	(a+b)/2

FIG. 29

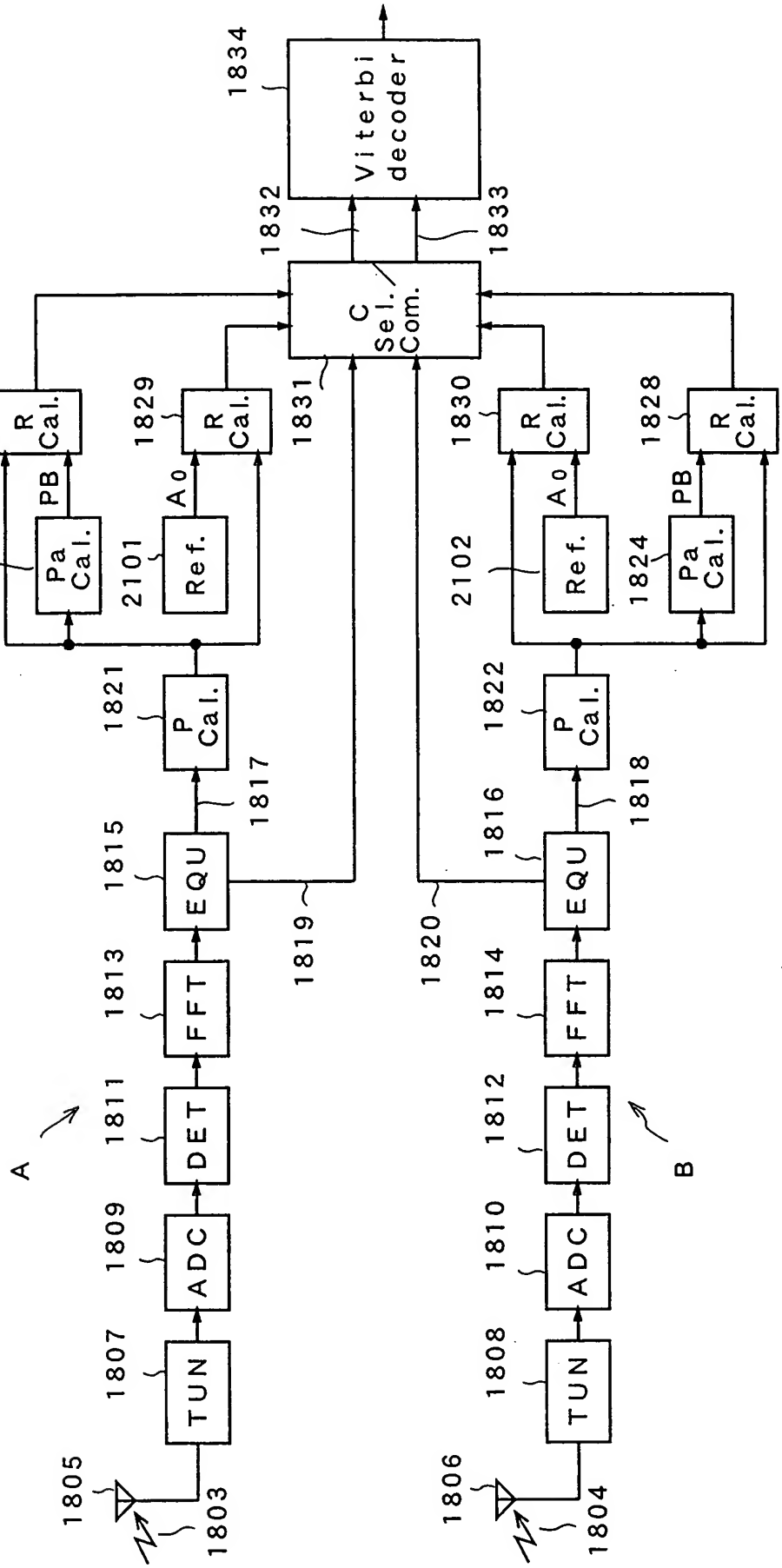

1834
Viterbi decoder
1832
1833
C Sel. Com.
1831
1827
R Cal.
1829
R Cal.
1830
R Cal.
1828
R Cal.
PB
A0
A0
PB
1823
Pa Cal.
2101
Ref.
2102
Ref.
1824
Pa Cal.
1821
P Cal.
1822
P Cal.
1817
1818
1815
EQU
1816
EQU
1819
1820
1813
FFT
1814
FFT
1811
DET
1812
DET
A
B
1809
ADC
1810
ADC
1807
TUN
1808
TUN
1805
1806
1803
1804

FIG. 30

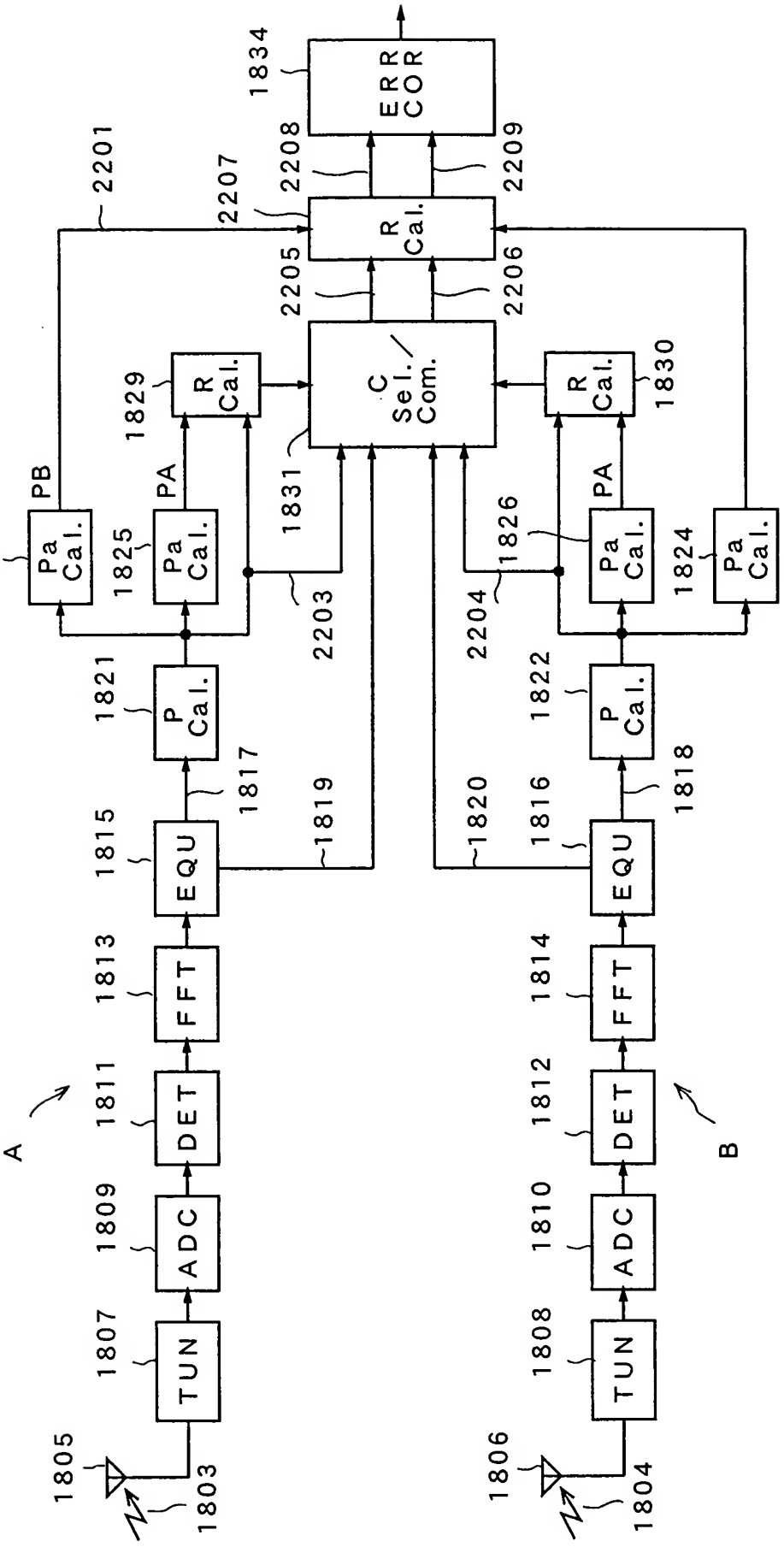
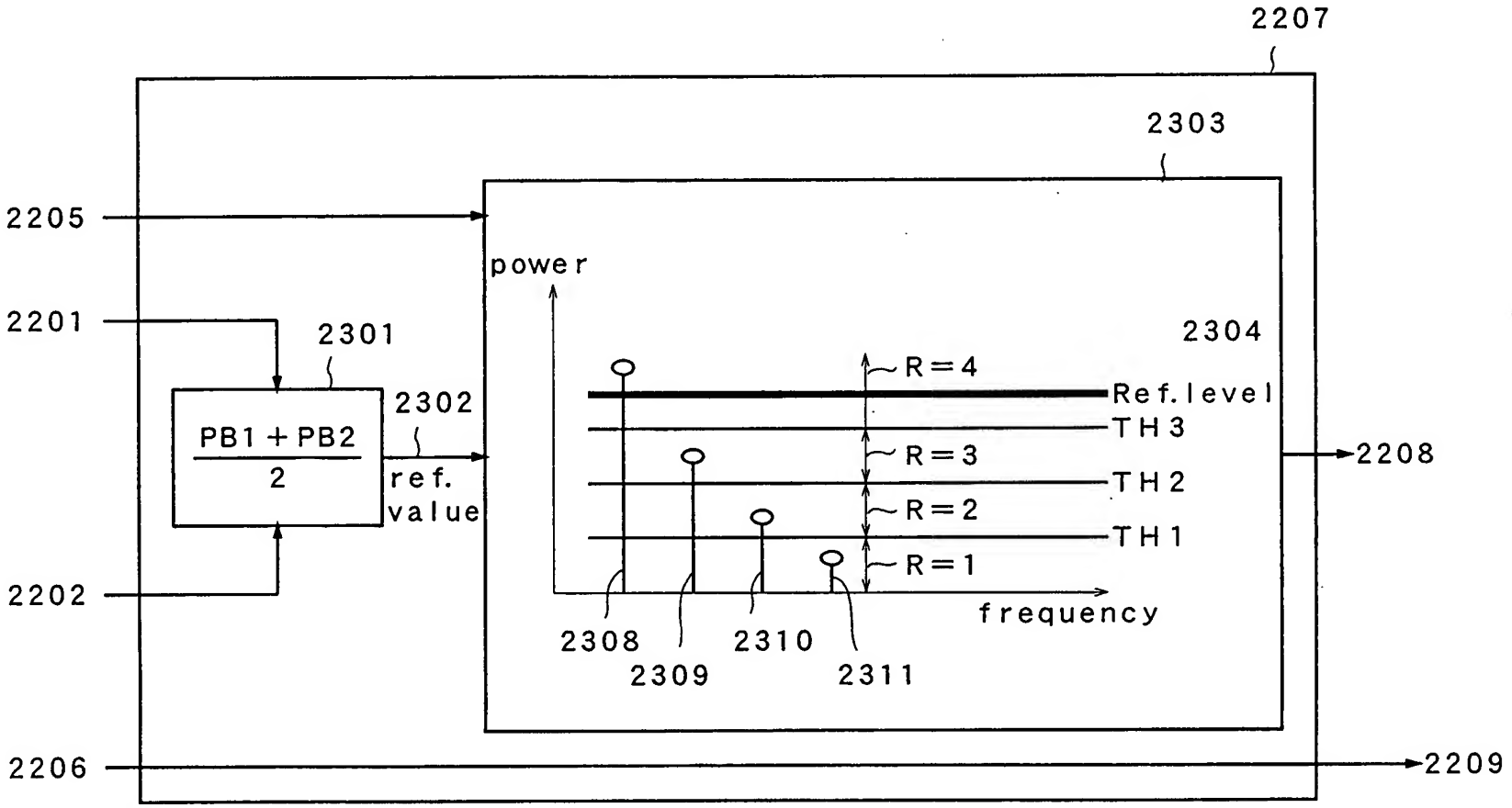

1805
1803
1806
1804
TUN
ADC
DET
FFT
EQU
P Cal.
Pa Cal.
R Cal.
C Sel./Com.
ERR COR
A
B
1807
1808
1809
1810
1811
1812
1813
1814
1815
1816
1817
1818
1819
1820
1821
1822
1823
1824
1825
1826
1829
1830
1831
2201
2203
2204
2205
2206
2207
2208
2209
1834
PB
PA

FIG. 31


2207
2303
2205
2201
2301
2304
power
R=4
Ref. level
TH3
R=3
TH2
R=2
TH1
R=1
frequency
PB1 + PB2
2
2302
ref.
value
2208
2202
2308
2309
2310
2311
2206
2209